

Set	Items	Description
S1	157	AU=(JACOBS S? OR JACOBS, S)
S2	122635	SCHEDUL? OR ASSIGN???
S3	65588	TASK? ? OR DUTY OR DUTIES
S4	329	WORK()ORDER? ?
S5	78	SUB()ORDER? ? OR SUBORDER?
S6	908242	START? OR BEGIN? OR INITIAT?
S7	3233060	COMPLETE? OR END? OR TERMINAT?
S8	1	S4 AND S5
S9	78	S2 AND S4
S10	25	S9 AND (S3 OR S6 OR S7)
S11	25	S8 OR S10
S12	8	S11 AND IC=G06F-017/60

? show file

File 347:JAPIO Nov 1976-2004/Oct(Updated 050208)

(c) 2005 JPO & JAPIO

File 350:Derwent WPIX 1963-2005/UD,UM &UP=200510

(c) 2005 Thomson Derwent

Scanned title & abstract

Set	Items	Description
S1	0	AU=(JACOBS S? OR JACOBS, S)
S2	26040836	SCHEDUL? OR ASSIGN??? OR MANAG?
S3	3594828	TASK? ? OR DUTY OR DUTIES
S4	25970	WORK()ORDER? ?
S5	173	SUB()ORDER? ? OR SUBORDER?
S6	17976205	START? OR BEGIN? OR INITIAT?
S7	23349790	COMPLETE? OR END? OR TERMINAT?
S8	160437	S2(3N)S3
S9	1	S4(S)S5
S10	168	S8(10N)S4
S11	88	S10 NOT PY>2000
S12	56	RD (unique items)
S13	57	S9 OR S12
File	9:Business & Industry(R) Jul/1984-2005/Feb 14	
	(c) 2005 The Gale Group	
File	15:ABI/Inform(R) 1971-2005/Feb 14	
	(c) 2005 ProQuest Info&Learning	
File	16:Gale Group PROMT(R) 1990-2005/Feb 15	
	(c) 2005 The Gale Group	
File	148:Gale Group Trade & Industry DB 1976-2005/Feb 14	
	(c)2005 The Gale Group	
File	160:Gale Group PROMT(R) 1972-1989	
	(c) 1999 The Gale Group	
File	275:Gale Group Computer DB(TM) 1983-2005/Feb 15	
	(c) 2005 The Gale Group	
File	621:Gale Group New Prod. Annou. (R) 1985-2005/Feb 15	
	(c) 2005 The Gale Group	
File	636:Gale Group Newsletter DB(TM) 1987-2005/Feb 15	
	(c) 2005 The Gale Group	
File	20:Dialog Global Reporter 1997-2005/Feb 15	
	(c) 2005 The Dialog Corp.	
File	476:Financial Times Fulltext 1982-2005/Feb 15	
	(c) 2005 Financial Times Ltd	
File	610:Business Wire 1999-2005/Feb 14	
	(c) 2005 Business Wire.	
File	613:PR Newswire 1999-2005/Feb 15	
	(c) 2005 PR Newswire Association Inc	
File	624:McGraw-Hill Publications 1985-2005/Feb 15	
	(c) 2005 McGraw-Hill Co. Inc	
File	634:San Jose Mercury Jun 1985-2005/Feb 12	
	(c) 2005 San Jose Mercury News	
File	810:Business Wire 1986-1999/Feb 28	
	(c) 1999 Business Wire	
File	813:PR Newswire 1987-1999/Apr 30	
	(c) 1999 PR Newswire Association Inc	

Set	Items	Description
S1	89	AU=(JACOBS S? OR JACOBS, S)
S2	588334	SCHEDUL? OR ASSIGN??? OR MANAG?
S3	131032	TASK? ? OR DUTY OR DUTIES
S4	624	WORK()ORDER? ?
S5	1060	SUB()ORDER? ? OR SUBORDER?
S6	787790	START? OR BEGIN? OR INITIAT?
S7	1356883	COMPLETE? OR END? OR TERMINAT?
S8	180	S2(10N)S4
S9	25	S8(15N) (S6 OR S 7)
S10	2	S4(S)S5
S11	11496	S2(10N)S3
S12	46	S11(S)S4
S13	22	(S9 OR S10, OR S12) AND IC=G06F-017/60

? show file

File 348:EUROPEAN PATENTS 1978-2005/Feb W01
(c) 2005 European Patent Office

File 349:PCT FULLTEXT 1979-2002/UB=20050203,UT=20050127
(c) 2005 WIPO/Univentio

Scanned Title & Abstract

Set	Items	Description
S1	3	AU=(JACOBS S? OR JACOBS, S)
S2	1373816	SCHEDUL? OR ASSIGN??? OR MANAG?
S3	299074	TASK? ? OR DUTY OR DUTIES
S4	852	WORK()ORDER? ?
S5	218	SUB()ORDER? ? OR SUBORDER?
S6	818398	START? OR BEGIN? OR INITIAT?
S7	1406645	COMPLETE? OR END? OR TERMINAT?
S8	1	S4 AND S5
S9	16716	S2(5N)S3
S10	17	S9 AND S4
S11	18	S8 OR S10
S12	18	S11 NOT PY>2000
S13	9	RD (unique items)
File	2:INSPEC 1969-2005/Feb W1	
	(c) 2005 Institution of Electrical Engineers	
File	35:Dissertation Abs Online 1861-2005/Jan	
	(c) 2005 ProQuest Info&Learning	
File	65:Inside Conferences 1993-2005/Feb W2	
	(c) 2005 BLDSC all rts. reserv.	
File	99:Wilson Appl. Sci & Tech Abs 1983-2005/Jan	
	(c) 2005 The HW Wilson Co.	
File	474:New York Times Abs 1969-2005/Feb 14	
	(c) 2005 The New York Times	
File	475:Wall Street Journal Abs 1973-2005/Feb 14	
	(c) 2005 The New York Times	
File	583:Gale Group Globalbase(TM). 1986-2002/Dec 13	
	(c) 2002 The Gale Group	
File	256:TecInfoSource 82-2004/Dec	
	(c) 2004 Info.Sources Inc	

Considered titles & abstract

849

13/3,K/1 (Item 1 from file: 9)
DIALOG(R)File 9:Business & Industry(R)
(c) 2005 The Gale Group. All rts. reserv.

2644302 Supplier Number: 02644302 (USE FORMAT 7 OR 9 FOR FULLTEXT)
Datastream introduces new online buy system for MRO
(Datastream has introduced an online industrial procurement network called
iProcure for maintenance, repair and operation supplies)
Purchasing, v 127, n 8, p 122
November 18, 1999
DOCUMENT TYPE: Journal ISSN: 0033-4448 (United States)
LANGUAGE: English RECORD TYPE: Fulltext
WORD COUNT: 485

(USE FORMAT 7 OR 9 FOR FULLTEXT)

TEXT:

...and maintenance software system that organizes and tracks inventory, manages equipment costs, tracks equipment history, **schedules** preventive maintenance **tasks**, allocates resources, generates **work orders**, and alerts maintenance professionals to potential equipment failure. MP5i is a configurable enterprise asset management...

13/3,K/2 (Item 1 from file: 15)
DIALOG(R)File 15:ABI/Inform(R)
(c) 2005 ProQuest Info&Learning. All rts. reserv.

01983382 49241668
Automated space planning on Capitol Hill
Teicholz, Eric
Facilities Design & Management v19n1 PP: 16-17 Jan 2000
ISSN: 0279-4438 JRNL CODE: FDM
WORD COUNT: 1488

...TEXT: to proceed to implement the recommendations in the strategic plan helped drive the project.

Work **management** . **Tasks** that are automated in CMMS include:

- * **Work order** processing
- * Accounting functions for labor and material management
- * Central help desk
- * Purchasing links
- * Scheduling and...

13/3,K/3 (Item 2 from file: 15)
DIALOG(R)File 15:ABI/Inform(R)
(c) 2005 ProQuest Info&Learning. All rts. reserv.

01807799 04-58790
Roundtable on environmental impact
Anonymous
IIE Solutions v31n4 PP: 66 Apr 1999
ISSN: 1085-1259 JRNL CODE: INE

WORD COUNT: 687

...TEXT: controls are used in the maintenance process and become an integral part of the maintenance **work order**, project **management tasks**, and general department procedures. Root cause failure analysis should be employed whenever major loss of...

13/3,K/4 (Item 3 from file: 15)

DIALOG(R)File 15:ABI/Inform(R)

(c) 2005 ProQuest Info&Learning. All rts. reserv.

01575311 02-26300

Utility briefs

Jones, Kevin

Electrical Apparatus v51n2 PP: 52 Feb 1998

ISSN: 0190-1370 JRNL CODE: ELAP

WORD COUNT: 490

...TEXT: with MCI Systemhouse of San Diego, a software developer, to produce hardware/software systems for **managing** such utility **tasks** as selling, provisioning, and **work order** management.

The venture, part of HP's Global Power Solutions initiative, is intended to bring...

13/3,K/5 (Item 4 from file: 15)

DIALOG(R)File 15:ABI/Inform(R)

(c) 2005 ProQuest Info&Learning. All rts. reserv.

01359112 00-10099

The art of asset management

Parker, Kevin

Manufacturing Systems v14n7 PP: 108-113 Jul 1996

ISSN: 0748-948X JRNL CODE: MFS

WORD COUNT: 2401

...TEXT: Datastream offers MaintainIt, a basic package with a single-user price of \$189. The package **schedules** maintenance **tasks** and prints **work orders**, but does not include the in-depth reporting features of MP2. MaintainIt has "seeded the..."

13/3,K/6 (Item 5 from file: 15)

DIALOG(R)File 15:ABI/Inform(R)

(c) 2005 ProQuest Info&Learning. All rts. reserv.

01217915 98-67310

Worlds collide

Dellinger, Michelle

Manufacturing Systems v14n5 PP: 20 May 1996

ISSN: 0748-948X JRNL CODE: MFS

WORD COUNT: 510

...TEXT: caused by the lack of integration with other business systems.

Traditional maintenance systems scheduled preventative **work orders** according to time-- **tasks** were **assigned** to be done every day or every two months, for instance. But if a machine...

13/3,K/7 (Item 6 from file: 15)
DIALOG(R)File 15:ABI/Inform(R)
(c) 2005 ProQuest Info&Learning. All rts. reserv.

01053640 97-03034

Establishing a maintenance program

Renner, Donald C

Water Engineering & Management v142n6 (Buyers Guide) PP: 50-53 Jun 1995

ISSN: 0273-2238 JRNL CODE: WEM

WORD COUNT: 2257

...TEXT: and effective the maintenance program will be. Predesigned maintenance programs usually come with forms included.

Work order forms should be developed to assist in **scheduling** and completing maintenance **tasks**. A side benefit of the **work order** is that it provides a place for the notation of equipment and building discrepancies or...

13/3,K/8 (Item 7 from file: 15)
DIALOG(R)File 15:ABI/Inform(R)
(c) 2005 ProQuest Info&Learning. All rts. reserv.

00952754 96-02147

Office technology

Barth, Claire

Management Accounting v76n6 PP: 61-63 Dec 1994

ISSN: 0025-1690 JRNL CODE: NAA

WORD COUNT: 2494

...TEXT: and project control allows managers to track the progress of plant-wide engineering projects. **Work tasks** can be **scheduled** and routed for appropriate approvals, and costs incurred for every **work order** can be tracked, even historical records from previous projects. Circle No. 62

Computer Associates is...

13/3,K/9 (Item 8 from file: 15)
DIALOG(R)File 15:ABI/Inform(R)
(c) 2005 ProQuest Info&Learning. All rts. reserv.

00813088 94-62480

JOB: An instructive job shop scheduling environment

Pruett, James M; Schartner, Andreas

International Journal of Operations & Production Management v13n11 PP: 4-34 1993

ISSN: 0144-3577 JRNL CODE: IJO

WORD COUNT: 4314

...TEXT: selecting the Interactive scheduling option, the screens shown in Figure 10 indicate that all unscheduled **work orders** are to be scheduled using the forward approach, i.e. **schedule tasks** from the current time forward. (Figure 10 omitted) Figure 11 describes W006, the work order...

13/3,K/10 (Item 9 from file: 15)

DIALOG(R)File 15:ABI/Inform(R)
(c) 2005 ProQuest Info&Learning. All rts. reserv.

00768736 94-18128

Computer software products

Anonymous

National Real Estate Investor v35n10 PP: 10 Sep 1993

ISSN: 0027-9994 JRNL CODE: NRE

WORD COUNT: 751

...TEXT: bank checks using WSSI's check printing software, the MICR PRO Series.

The software prioritizes **work orders** into four categories: resident requests, **scheduled** maintenance, priority **tasks** and other. Twenty work codes are available for tracking the type of maintenance performed, and...

13/3,K/11 (Item 10 from file: 15)

DIALOG(R)File 15:ABI/Inform(R)

(c) 2005 ProQuest Info&Learning. All rts. reserv.

00767796 94-17188

Implementing a microcomputer-based work reporting and monitoring system for government services: A case study

Kiel, L Douglas

Journal of End User Computing v5n1 PP: 18-25 Winter 1993

ISSN: 1063-2239 JRNL CODE: EUC

WORD COUNT: 4648

...TEXT: serves as a means for measuring efficiency (costs in time and money) and effectiveness (outputs). **Tasks** also required an **assigned** code or **work order** number in order to monitor progress on and completion of each task. The communication division...

13/3,K/12 (Item 11 from file: 15)

DIALOG(R)File 15:ABI/Inform(R)

(c) 2005 ProQuest Info&Learning. All rts. reserv.

00640977 92-55917

Critical Resource Diagram: A New Tool for Resource Management

Badiru, Adedeji B.

Industrial Engineering v24n10 PP: 58-59, 65 Oct 1992

ISSN: 0019-8234 JRNL CODE: INE

WORD COUNT: 1824

...TEXT: 3 may turn out to be a bottleneck resource. RES 3 may be a senior **manager** whose **task** is that of signing a **work order**. But if he or she is not available to sign at the appropriate time, then...

13/3,K/13 (Item 12 from file: 15)

DIALOG(R)File 15:ABI/Inform(R)

(c) 2005 ProQuest Info&Learning. All rts. reserv.

00626706 92-41808

From a Maintenance to a Management System

Kimmel, Peter S.

Facilities Design & Management v11n7 PP: 27 Jul 1992

ISSN: 0279-4438 JRNL CODE: FDM
WORD COUNT: 935

...TEXT: made it easy to assign expenditures to various cost categories. The. could even store regularly **scheduled** preventive maintenance (PM) **tasks** , which were incorporated into PM **work orders** .

With this data stored in a computer and by adding the right tools, facilities or...

13/3,K/14 (Item 13 from file: 15)
DIALOG(R)File 15:ABI/Inform(R)
(c) 2005 ProQuest Info&Learning. All rts. reserv.

00563253 91-37607
The New Breed of Supervisor: Leaders in Self-Managed Work Teams
Odiorne, George S.
Supervision v52n8 PP: 14-17 Aug 1991
ISSN: 0039-5854 JRNL CODE: SUP
WORD COUNT: 1732

...TEXT: of small groups of employees whose members produce an entire product or service, learn all **tasks** , rotate jobs, **schedule work** , **order** materials and other tasks previously done by a first-line supervisor. Business Week in 1989...

13/3,K/15 (Item 1 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)
(c) 2005 The Gale Group. All rts. reserv.

07424611 Supplier Number: 62214783 (USE FORMAT 7 FOR FULLTEXT)
A RAILROAD ROMANCE.
WEISKOTT, MARIA N.
Plants Sites & Parks, v27, n2, p74
April, 2000
Language: English Record Type: Fulltext
Document Type: Magazine/Journal; Trade
Word Count: 2708

... bankruptcy protection in 1995. A bonding agency then formed Amerail, a temporary corporation that was **assigned** the **task** of completing Morrison Knudsen's existing con tracts and **work orders** . As the work phased to completion, Hornell again faced the prospect of losing its primary...

13/3,K/16 (Item 2 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)
(c) 2005 The Gale Group. All rts. reserv.

06981445 Supplier Number: 57759722 (USE FORMAT 7 FOR FULLTEXT)
Datastream introduces new online buy system for MRO.(maintenance, repair, and operation.) (Brief Article) (Statistical Data Included)
Avery, Susan
Purchasing, v127, n8, p92
Nov 18, 1999
Language: English Record Type: Fulltext
Article Type: Brief Article; Statistical Data Included

Document Type: Magazine/Journal; Trade
Word Count: 481

... and maintenance software system that organizes and tracks inventory, manages equipment costs, tracks equipment history, **schedules** preventive maintenance **tasks**, allocates resources, generates **work orders**, and alerts maintenance professionals to potential equipment failure. MP5i is a configurable enterprise asset management...

13/3,K/17 (Item 3 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)
(c) 2005 The Gale Group. All rts. reserv.

06930005 Supplier Number: 58536211 (USE FORMAT 7 FOR FULLTEXT)
Micros Retail Systems Enhances Value-Added Point-of-Sale Solutions with Astea's ServiceAlliance(R).
PR Newswire, p9800
Jan 12, 2000
Language: English Record Type: Fulltext
Document Type: Newswire; Trade
Word Count: 1159

... AllianceProjects(TM) option, which integrates with Microsoft(R) Project 98, will be used to automate **work order** creation and the **management** of **tasks** and milestones associated with installing POS equipment.
Micros Retail Systems will also use ServiceAlliance to...

13/3,K/18 (Item 4 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)
(c) 2005 The Gale Group. All rts. reserv.

06856190 Supplier Number: 58071333 (USE FORMAT 7 FOR FULLTEXT)
Canada's LOGICORP Selects Astea's ServiceAlliance(R).
PR Newswire, p7294
Dec 8, 1999
Language: English Record Type: Fulltext
Document Type: Newswire; Trade
Word Count: 1094

... options. AllianceProjects (TM), which integrates with Microsoft(R) Project 98, will be used to automate **work order** creation and the **management** of **tasks** and milestones associated with computer network installations. AllianceMobile (TM), a Web-based remote communications option...

13/3,K/19 (Item 5 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)
(c) 2005 The Gale Group. All rts. reserv.

06390540 Supplier Number: 54806578 (USE FORMAT 7 FOR FULLTEXT)
Datastream Product Line to Support Microsoft Office 2000.
PR Newswire, p3933
June 7, 1999
Language: English Record Type: Fulltext
Document Type: Newswire; Trade
Word Count: 516

... Professional offers an array of easy-to-use features to streamline maintenance operations by generating **work orders** and purchase orders, **scheduling** preventive maintenance (PM) **tasks**, and providing on-line purchasing of Maintenance, Repair and Operations (MRO) parts. MaintainIt Pro and...

13/3,K/20 (Item 6 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)
(c) 2005 The Gale Group. All rts. reserv.

06072693 Supplier Number: 53550723 (USE FORMAT 7 FOR FULLTEXT)
Datastream Systems Announces Release Of MP2(R) Professional(TM) For Microsoft(R) Access(TM) Database In Seven Languages.
PR Newswire, p2304
Jan 12, 1999
Language: English Record Type: Fulltext
Document Type: Newswire; Trade
Word Count: 444

... along with an array of easy-to-use features to streamline maintenance operations by generating **work orders** and purchase orders, **scheduling** preventive maintenance (PM) **tasks**, and maintaining inventory levels. A Microsoft Office(TM) 97 compatible application, MP2 Professional for Microsoft...

13/3,K/21 (Item 7 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)
(c) 2005 The Gale Group. All rts. reserv.

05048548 Supplier Number: 47411198 (USE FORMAT 7 FOR FULLTEXT)
Welcome to the service desk
Collins, Gary
Computing Canada, p032
May 26, 1997
Language: English Record Type: Fulltext
Document Type: Magazine/Journal; Trade
Word Count: 829

... routine change-related tasks such as hardware equipment and software upgrades and even new hires.

Work orders can be distributed automatically and dependencies **assigned** so that each **task** gets done in the right order and nothing gets skipped.

Asset management automation includes the...

13/3,K/22 (Item 8 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)
(c) 2005 The Gale Group. All rts. reserv.

05014525 Supplier Number: 47363520 (USE FORMAT 7 FOR FULLTEXT)
Microsoft Visual Basic Moves in at Ryder
PR Newswire, p505LAM045
May 5, 1997
Language: English Record Type: Fulltext
Document Type: Newswire; Trade
Word Count: 1031

... vehicle maintenance system that will handle maintenance activities including these:

- Planning and scheduling vehicle maintenance
- **Work order** and task **management**
- Parts purchasing and inventory management
- Vehicle repair history and specification analysis
- Customer communications

"This system...

13/3,K/23 (Item 9 from file: 16)

DIALOG(R)File 16:Gale Group PROMT(R)
(c) 2005 The Gale Group. All rts. reserv.

04708752 Supplier Number: 46931019 (USE FORMAT 7 FOR FULLTEXT)
Manhattan Associates
Modern Materials Handling, pW18
Dec, 1996
Language: English Record Type: Fulltext
Document Type: Magazine/Journal; Trade
Word Count: 242

... and floor ready processing including price labeling, and package quantity. Enhanced functionalities include 4GL capabilities, **task management**, **work order management**, and client/server/GUI wave management.

13/3,K/24 (Item 10 from file: 16)

DIALOG(R)File 16:Gale Group PROMT(R)
(c) 2005 The Gale Group. All rts. reserv.

03234625 Supplier Number: 44443472 (USE FORMAT 7 FOR FULLTEXT)
MAINTENANCE MANAGEMENT SOFTWARE ADDS EASY-TO-USE SCHEDULER
News Release, pN/A
Feb 16, 1994
Language: English Record Type: Fulltext
Document Type: Magazine/Journal; Trade
Word Count: 439

... week. The On-Screen Scheduler examines the estimated hours required for preventive maintenance tasks and **work orders**, then displays a calendar showing the relationship between **scheduled tasks** to available man hours. Days with 1-80 percent of the craft hours scheduled appear...

13/3,K/25 (Item 11 from file: 16)

DIALOG(R)File 16:Gale Group PROMT(R)
(c) 2005 The Gale Group. All rts. reserv.

02778998 Supplier Number: 43728079 (USE FORMAT 7 FOR FULLTEXT)
PRENTICE HALL ADDS PROPERTY MAINTENANCE MODULE
News Release, p1
March 23, 1993
Language: English Record Type: Fulltext
Document Type: Magazine/Journal; Trade
Word Count: 747

... residents, if
desired.

Thorough Tracking. Comprehensive Reports
Prentice Hall's new Property Maintenance software prioritizes **work orders** into four categories: Resident requests, **scheduled** maintenance, priority **tasks**, and "other." Up to 20 work codes are available for tracking the type of maintenance...

13/3,K/26 (Item 12 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)
(c) 2005 The Gale Group. All rts. reserv.

02537710 Supplier Number: 43362245 (USE FORMAT 7 FOR FULLTEXT)
ENHANCED DP UMBRELLA (TM) IMPROVES ASSET AND HELP DESK MANAGEMENT
News Release, pl
Oct 9, 1992
Language: English Record Type: Fulltext
Document Type: Magazine/Journal; Trade
Word Count: 722

... particular technician. For calls that cannot be resolved over the phone, Helpline now tracks multiple **work orders** to monitor all the **tasks assigned** to complete or repair problems at hand. The system checks the experience database of past...

13/3,K/27 (Item 13 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)
(c) 2005 The Gale Group. All rts. reserv.

01478635 Supplier Number: 41789539 (USE FORMAT 7 FOR FULLTEXT)
SYSCON-PLANTSTAR AND DATASTREAM SYSTEMS DEVELOP DATA INTERFACE
News Release, pl
Jan 11, 1991
Language: English Record Type: Fulltext
Document Type: Magazine/Journal; Trade
Word Count: 309

... the Datastream MP2 package. MP2 is a complete computerized maintenance system that lets users manage **work orders**, equipment histories, inventory, purchasing and personnel. **Scheduled** preventive maintenance **tasks** from MP2 can be entered into the PlantStar Focus-100 scheduling package. This allows users...

13/3,K/28 (Item 1 from file: 148)
DIALOG(R)File 148:Gale Group Trade & Industry DB
(c)2005 The Gale Group. All rts. reserv.

11903234 SUPPLIER NUMBER: 59635078 (USE FORMAT 7 OR 9 FOR FULL TEXT)
GROWING PAINS.
Bishop, Phil
Doors and Hardware, 64, 2, 14
Feb, 2000
ISSN: 0361-5294 LANGUAGE: English RECORD TYPE: Fulltext
WORD COUNT: 1196 LINE COUNT: 00098

... for hinges.

A complete information system should allow the order to be placed, generate a **work order** and a bill of materials, make inventory adjustments, **schedule** the **task**, apply the charges to accounts receivable, and note receipt of payment. The system that manages...

13/3,K/29 (Item 2 from file: 148)

DIALOG(R)File 148:Gale Group Trade & Industry DB
(c)2005 The Gale Group. All rts. reserv.

11334567 SUPPLIER NUMBER: 55654007 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Proactive maintenance: you can bank on it.

Morris, Charles E.

Food Engineering, 71, 7-8, 51(6)

July-August, 1999

ISSN: 1522-2292 LANGUAGE: English RECORD TYPE: Fulltext

WORD COUNT: 2235 LINE COUNT: 00216

... Food Engineering use Datastream's (Greenville, SC) MP2 maintenance management software which tracks equipment history, **schedules** preventive-maintenance **tasks**, generates **work orders**, requisitions and purchases spare parts, maintains spare-parts inventories, allocates and records maintenance resources, and...

13/3,K/30 (Item 3 from file: 148)

DIALOG(R)File 148:Gale Group Trade & Industry DB
(c)2005 The Gale Group. All rts. reserv.

10371128 SUPPLIER NUMBER: 20901283 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Redefining maintenance. (food factories) (includes related articles on infrared imaging and intelligent motors)

Mancini, Letica

Chilton's Food Engineering, v70, n6, p129(4)

June, 1998

ISSN: 0193-323X LANGUAGE: English RECORD TYPE: Fulltext

WORD COUNT: 1981 LINE COUNT: 00169

... is a full time job for 20 mechanics on three shifts.

Pipenger has found the **task scheduling** and **work order** generation features invaluable. The software is also able to track jobs, in progress. "We are...

13/3,K/31 (Item 4 from file: 148)

DIALOG(R)File 148:Gale Group Trade & Industry DB
(c)2005 The Gale Group. All rts. reserv.

10158479 SUPPLIER NUMBER: 20051846 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Globalization guide technology development. (1997 Bobbin Show)

Bobbin, v38, n12, p46(11)

August, 1997

ISSN: 0896-3991 LANGUAGE: English RECORD TYPE: Fulltext

WORD COUNT: 6695 LINE COUNT: 00550

... Version 18 of its PkMS(TM) warehouse management system (WMS), which has new features including **task management**, productivity tracking, **work order** management and appointment scheduling. Running on AS/400 and

UNIX platforms, this modular package automates...

13/3,K/32 (Item 5 from file: 148)

DIALOG(R)File 148:Gale Group Trade & Industry DB
(c)2005 The Gale Group. All rts. reserv.

09938291 SUPPLIER NUMBER: 20094328 (USE FORMAT 7 OR 9 FOR FULL TEXT)
The latest in logistics technology - bar none. (Scan-Tech's latest products)
Logistics Management, v36, n10, p75S(3)
Oct, 1997
ISSN: 1089-537X LANGUAGE: English RECORD TYPE: Fulltext; Abstract
WORD COUNT: 1848 LINE COUNT: 00156

... today's Quick Response and Efficient Consumer Response environments.

Some of the new enhancements include **task management**, productivity tracking, **work - order** management, and appointment scheduling.

Advance Bar-Code Program Speaks Many Languages
Advance Bar Code Technology...

13/3,K/33 (Item 6 from file: 148)

DIALOG(R)File 148:Gale Group Trade & Industry DB
(c)2005 The Gale Group. All rts. reserv.

08831692 SUPPLIER NUMBER: 18389799 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Trends in property management. (Focus on: Property Management)
Fazen, Robert
Real Estate Weekly, v42, n37, pS8(2)
April 17, 1996
LANGUAGE: English RECORD TYPE: Fulltext
WORD COUNT: 610 LINE COUNT: 00053

... and continue to grow in strength. These programs provide the ability to schedule and generate **work orders**, **manage** preventive maintenance **tasks**, track all equipment histories, organize and track inventories, manage purchasing functions, maintain complete confidential labor...

13/3,K/34 (Item 7 from file: 148)

DIALOG(R)File 148:Gale Group Trade & Industry DB
(c)2005 The Gale Group. All rts. reserv.

07666300 SUPPLIER NUMBER: 16497367 (USE FORMAT 7 OR 9 FOR FULL TEXT)
How to make a PM program pay. (preventive maintenance) (includes related articles)
Stewart, Larry
Construction Equipment, v91, n1, p32(6)
Jan, 1995
ISSN: 0192-3978 LANGUAGE: ENGLISH RECORD TYPE: FULLTEXT; ABSTRACT
WORD COUNT: 3408 LINE COUNT: 00268

... system would allow fuelers or lube men to report hour-meter readings or fuel consumption.

Work orders gather basic equipment information together and are used to **assign** individual **tasks**. Some software systems even generate a parts list to accompany each work order that can...

13/3,K/35 (Item 8 from file: 148)
DIALOG(R)File 148:Gale Group Trade & Industry DB
(c)2005 The Gale Group. All rts. reserv.

07178011 SUPPLIER NUMBER: 15069638 (USE FORMAT 7 OR 9 FOR FULL TEXT)
DP Umbrella help desk upgrades with MS Mail support. (Vycor Corp.'s
SQL-based help-desk package, version 2.5) (News Briefs) (Brief Article)
(Product Announcement)
PC Week, v11, n6, p48(1)
Feb 14, 1994
DOCUMENT TYPE: Product Announcement ISSN: 0740-1604 LANGUAGE:
ENGLISH RECORD TYPE: FULLTEXT
WORD COUNT: 109 LINE COUNT: 00009

... desk package, DP Umbrella for Windows.
The upgrade gains Microsoft Mail support, the ability to **assign**
task dependencies to activities or **work orders**, equipment searches, a
zoom feature, and expanded configuration options. The \$7,995 application,
which was...

13/3,K/36 (Item 9 from file: 148)
DIALOG(R)File 148:Gale Group Trade & Industry DB.
(c)2005 The Gale Group. All rts. reserv.

06728402 SUPPLIER NUMBER: 14452746 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Pen computing: first, pick an OS. (the nature of applications can dictate
the choice of a pen operating system) (PCs & Workstations: Pen Computing)
Semich, J. William
Datamation, v39, n19, p36(2)
Oct 1, 1993
ISSN: 1062-8363 LANGUAGE: ENGLISH RECORD TYPE: FULLTEXT; ABSTRACT
WORD COUNT: 1366 LINE COUNT: 00126

... CPU and data storage device for physical asset management. The
application, which can also build **work orders** for asset **management**
tasks, is designed for workers who would have difficulty using
keyboard-based computers because of the...

13/3,K/37 (Item 10 from file: 148)
DIALOG(R)File 148:Gale Group Trade & Industry DB
(c)2005 The Gale Group. All rts. reserv.

04868707 SUPPLIER NUMBER: 09063004 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Eggomation. (Kellogg Canada uses PMIS software from Fleming System Corp.)
(Processing & Control)
Food Engineering, v62, n9, p158(1)
Sept, 1990
ISSN: 0193-323X LANGUAGE: ENGLISH RECORD TYPE: FULLTEXT
WORD COUNT: 277 LINE COUNT: 00024

... and where parts are used, tracks repairable spares (e.g. motors,
gear boxes, etc.), estimates **tasks**, **schedules work orders** and
shutdowns, triggers preventive maintenance, documents repair history and
collects manpower/material costs. For inventory...

13/3,K/38 (Item 11 from file: 148)

DIALOG(R)File 148:Gale Group Trade & Industry DB
(c)2005 The Gale Group. All rts. reserv.

02333056 SUPPLIER NUMBER: 03831775 (USE FORMAT 7 OR 9 FOR FULL TEXT)

A plant engineer's guide to microcomputer applications software.

(directory) (illustration)

Katzel, Jeanine

Plant Engineering, v39, p48(24)

June 27, 1985

DOCUMENT TYPE: illustration

ISSN: 0032-082X

LANGUAGE: ENGLISH

RECORD TYPE: FULLTEXT

WORD COUNT: 37018 LINE COUNT: 02961

... 269, Bowling Green, OH 43402. Phone: (419) 354-3981.

PMS, preventive maintenance system, establishes PM **tasks** and **schedules**; prints weekly **work orders**, inventory lists, and future work schedules; maintains and retrieves historical data on PM tasks; tracks...

13/3,K/39 (Item 12 from file: 148)

DIALOG(R)File 148:Gale Group Trade & Industry DB
(c)2005 The Gale Group. All rts. reserv.

02324970 SUPPLIER NUMBER: 03701839 (USE FORMAT 7 OR 9 FOR FULL TEXT)

Maintenance management system versatile, powerful. (column)

Katzel, Jeanine

Plant Engineering, v39, p94(2)

March 28, 1985

DOCUMENT TYPE: column

ISSN: 0032-082X

LANGUAGE: ENGLISH

RECORD TYPE: FULLTEXT

WORD COUNT: 595 LINE COUNT: 00049

... place, PM work orders may be issued automatically on a weekly basis. Up to five **tasks** may be **assigned** to each **work order**.

A detailed maintenance history file also is provided. Completed work orders are used to generate...

13/3,K/40 (Item 13 from file: 148)

DIALOG(R)File 148:Gale Group Trade & Industry DB
(c)2005 The Gale Group. All rts. reserv.

02321730 SUPPLIER NUMBER: 03643568 (USE FORMAT 7 OR 9 FOR FULL TEXT)

Maintenance package promotes control, customizes reports. (column)

Katzel, Jeanine

Plant Engineering, v39, p70(2)

Feb 14, 1985

DOCUMENT TYPE: column

ISSN: 0032-082X

LANGUAGE: ENGLISH

RECORD TYPE: FULLTEXT

WORD COUNT: 784 LINE COUNT: 00064

... add, delete, modify, list; or print data.

The system effectively performs all the standard maintenance **management tasks** and more. Among the most important functions are the **work order** and the PM modules. Through the work-order file, the user may print work orders...

13/3,K/41 (Item 14 from file: 148)

DIALOG(R)File 148:Gale Group Trade & Industry DB
(c)2005 The Gale Group. All rts. reserv.

01750150 SUPPLIER NUMBER: 02623450 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Planned maintenance replaces "quick fix" situations. (laundry equipment)
Hospitals, Journal of American Hospital Association, v57, p95(1)
Feb 1, 1983
LANGUAGE: ENGLISH RECORD TYPE: FULLTEXT
WORD COUNT: 602 LINE COUNT: 00050

... These routine work orders are sent to the hospital's maintenance crew, along with priority **work orders** that are issued when critical **tasks scheduled** the previous week are not completed. The maintenance crew records tasks completed, including unscheduled work...

13/3,K/42 (Item 1 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)
(c) 2005 The Gale Group. All rts. reserv.

02000402 SUPPLIER NUMBER: 18791010 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Building a better way for better products. (use of software systems by manufacturing companies) (includes related article on weaknesses of old manufacturing systems) (Industry Trend or Event)
Toigo, Jon William
HP Professional, v10, n10, p21(5)
Oct, 1996
ISSN: 0896-145X LANGUAGE: English RECORD TYPE: Fulltext; Abstract
WORD COUNT: 2672 LINE COUNT: 00231

... the plan itself. A short time ago, this consisted of manual processes. You had to **schedule tasks**, perform quality assurance, implement a program of maintenance management, track **work orders**, record results -- it was very paper intensive. Over a 10-year period, many of these...

13/3,K/43 (Item 2 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)
(c) 2005 The Gale Group. All rts. reserv.

01967395 SUPPLIER NUMBER: 18561645
Manufacturing: building on the bleeding edge. (one of three articles on implementing vertical applications) (Technology Information) (Cover Story)
Toigo, Jon William
Digital Age, v15, n8, p15(4)
August, 1996
DOCUMENT TYPE: Cover Story LANGUAGE: English RECORD TYPE:
Fulltext; Abstract
WORD COUNT: 1988 LINE COUNT: 00168

... the plan itself. A short time ago, this consisted of manual processes. You had to **schedule tasks**, perform quality assurance, implement a program of maintenance management, track **work orders**, record results--it was very paper intensive. Over a 10-year period, many of these...

13/3,K/44 (Item 3 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)

(c) 2005 The Gale Group. All rts. reserv.

01446492 SUPPLIER NUMBER: 10819320 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Cable management: seven steps to better infrastructure management.
(includes related article)

Kaiser, John

Teleconnect, v9, n6, p98(2)

June, 1991

ISSN: 0740-9354 LANGUAGE: ENGLISH RECORD TYPE: FULLTEXT; ABSTRACT

WORD COUNT: 572 LINE COUNT: 00044

... moves and changes. One of a telecom manager's most critical -- and most time-consuming -- **tasks**. Cable- **management** systems can generate **work orders** and then tract them through to completion to dramatically cut the time spent on this...

13/3,K/45 (Item 4 from file: 275)

DIALOG(R)File 275:Gale Group Computer DB(TM)

(c) 2005 The Gale Group. All rts. reserv.

01376454 SUPPLIER NUMBER: 09471113 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Object processing for knowledge-based systems.

Kowalski, Bernadette; Stipp, Lori

AI Expert, v5, n10, p34(8)

Oct, 1990

ISSN: 0888-3785 LANGUAGE: ENGLISH RECORD TYPE: FULLTEXT; ABSTRACT

WORD COUNT: 3674 LINE COUNT: 00368

... **Task)**

THEN

SEND (**Schedule** TO Assignment WITH Person)

TABLE 1.

Sample input:

work orders .

* OMITTED

TABLE 2

Sample output..

scheduled and

postponed work

orders.

* OMITTED

TABLE 3. Sample input

13/3,K/46 (Item 1 from file: 621)

DIALOG(R)File 621:Gale Group New Prod.Annou.(R)

(c) 2005 The Gale Group. All rts. reserv.

01060145 Supplier Number: 40241360 (USE FORMAT 7 FOR FULLTEXT)

J B SYSTEMS ANNOUNCES IBM PS/2 COMPATIBILITY

News Release, p1

Dec 23, 1987

Language: English Record Type: Fulltext

Document Type: Magazine/Journal; Trade

Word Count: 791

... preventive maintenance for each piece of equipment requiring routine attention. This module prints the actual **Work Order**

for the scheduler
to use in **assigning tasks** to the maintenance force. These **Work Orders**
contain all the information required by the maintenance personnel to perform their work including equipment...

13/3,K/47 (Item 2 from file: 621)
DIALOG(R)File 621:Gale Group New Prod.Annou.(R)
(c) 2005 The Gale Group. All rts. reserv.

01051509 Supplier Number: 40160569 (USE FORMAT 7 FOR FULLTEXT)
REMOTE CUSTOMER SUPPORT CAPABILITY ADDED TO MAINSAVER MAINTENANCE MANAGEMENT SOFTWARE PROGRAM
PR Newswire, pN/A
Sept 8, 1987
Language: English Record Type: Fulltext
Document Type: Newswire; Trade
Word Count: 661

...
preventive maintenance for each piece of equipment requiring routine attention. This module prints the actual **Work Order**
for the scheduler
to use in **assigning task** to the maintenance force. These **Work Orders**
contain all the information required by the maintenance personnel to perform their work, including equipment...

13/3,K/48 (Item 3 from file: 621)
DIALOG(R)File 621:Gale Group New Prod.Annou.(R)
(c) 2005 The Gale Group. All rts. reserv.

01036205 Supplier Number: 40000302 (USE FORMAT 7 FOR FULLTEXT)
MAINSAVER is the most complete maintenance management software system available for IBM and IBM compatible personal computers, the IBM 36 and 38 minicomputers and the DEC VAX computers.
PR Newswire, pN/A
March 20, 1987
Language: English Record Type: Fulltext
Document Type: Newswire; Trade
Word Count: 570

...
preventive maintenance for each piece of equipment requiring routine attention. This module prints the actual **Work Order** for the scheduler to use in **assigning tasks**
to the maintenance force. These
Work Orders
contain all the information required by the maintenance personnel to perform their work, including equipment...

13/3,K/49 (Item 1 from file: 636)
DIALOG(R)File 636:Gale Group Newsletter DB(TM)
(c) 2005 The Gale Group. All rts. reserv.

03560119 Supplier Number: 47364491 (USE FORMAT 7 FOR FULLTEXT)
MICROSOFT: Microsoft Visual Basic moves in at Ryder

M2 Presswire, pN/A
May 6, 1997
Language: English Record Type: Fulltext
Document Type: Newswire; Trade
Word Count: 983

... vehicle maintenance system that will handle maintenance activities including these: * Planning and scheduling vehicle maintenance * **Work order and task management** * Parts purchasing and inventory management * Vehicle repair history and specification analysis * Customer communications
"This system...

13/3,K/50 (Item 2 from file: 636)
DIALOG(R)File 636:Gale Group Newsletter DB(TM)
(c) 2005 The Gale Group. All rts. reserv.

02295948 Supplier Number: 44445591 (USE FORMAT 7 FOR FULLTEXT)
Amerada Hess keeps staff costs down with imaging technology
Business Computing Brief, pN/A
Feb 17, 1994
Language: English Record Type: Fulltext
Document Type: Newsletter; Trade
Word Count: 1169

... by this number whether she is looking for a contract, purchase order, service order, or **work order** (part of a large purchase order, similar to a **sub - order**).

Windows technology enables the clerk to verify certain elements of the commitment, called compliance. She...

13/3,K/51 (Item 1 from file: 20)
DIALOG(R)File 20:Dialog Global Reporter
(c) 2005 The Dialog Corp. All rts. reserv.

08614137 (USE FORMAT 7 OR 9 FOR FULLTEXT)
(CNW) Canada's LOGICORP Selects Astea's ServiceAlliance(R)
CANADA NEWSWIRE
December 08, 1999
JOURNAL CODE: WCNW LANGUAGE: English RECORD TYPE: FULLTEXT
WORD COUNT: 1106

(USE FORMAT 7 OR 9 FOR FULLTEXT)

... options. AllianceProjects (TM), which integrates with Microsoft(R) Project 98, will be used to automate **work order** creation and the **management** of **tasks** and milestones associated with computer network installations. AllianceMobile (TM), a Web-based remote communications option...

13/3,K/52 (Item 2 from file: 20)
DIALOG(R)File 20:Dialog Global Reporter
(c) 2005 The Dialog Corp. All rts. reserv.

07905844 (USE FORMAT 7 OR 9 FOR FULLTEXT)
Granite Systems Offers Greater Efficiency, Substantial Time Savings With Xpercom 3.5 Suite of Solutions

BUSINESS WIRE

October 25, 1999

JOURNAL CODE: WBWE LANGUAGE: English RECORD TYPE: FULLTEXT

WORD COUNT: 802

(USE FORMAT 7 OR 9 FOR FULLTEXT)

... and ease of use.

Xperworx 3.5

Xperworx 3.5 delivers web-based customer-oriented **work order** and **task management** functionality. Granite Systems, among the first to offer web-browser task management, has extended its...

13/3,K/53 (Item 3 from file: 20)

DIALOG(R)File 20:Dialog Global Reporter

(c) 2005 The Dialog Corp. All rts. reserv.

04660542 (USE FORMAT 7 OR 9 FOR FULLTEXT)

Indus International Standardizes on SQRIBE as Reporting Solution for Worldwide Customer Base

BUSINESS WIRE

March 16, 1999

JOURNAL CODE: WBWE LANGUAGE: English RECORD TYPE: FULLTEXT

WORD COUNT: 782

(USE FORMAT 7 OR 9 FOR FULLTEXT)

... addition to standard enterprise reporting capabilities, SQRIBE technology enables Indus Solutions Series customers to run **scheduled tasks**, such as generating **work orders** based on preventive maintenance schedules. This ensures plant managers and operations supervisors receive accurate information...

13/3,K/54 (Item 4 from file: 20)

DIALOG(R)File 20:Dialog Global Reporter

(c) 2005 The Dialog Corp. All rts. reserv.

03993239 (USE FORMAT 7 OR 9 FOR FULLTEXT)

ASIANET - SUMMARY FOR TUESDAY, JAN 12, 1999

ASIA PULSE

January 12, 1999

JOURNAL CODE: WAPL LANGUAGE: English RECORD TYPE: FULLTEXT

WORD COUNT: 317

(USE FORMAT 7 OR 9 FOR FULLTEXT)

... platform."

MP2 Professional provided a flexible graphical user interface to streamline maintenance operations by generating **work orders** and purchase orders, **scheduling** preventive maintenance **tasks** and maintaining inventory levels.

(AsiaNet is a cooperative of leading news agencies distributing unedited press...

13/3,K/55 (Item 1 from file: 624)

DIALOG(R)File 624:McGraw-Hill Publications

(c) 2005 McGraw-Hill Co. Inc. All rts. reserv.

01006558

New Software Eases Maintenance Data Sharing

MICHAEL O. LAVITT

Aviation Week & Space Technology, Vol. 150, No. 17, Pg 88

April 26, 1999

JOURNAL CODE: AW

SECTION HEADING: INTERNATIONAL PRODUCT NEWS ISSN: 0005-2175

WORD COUNT: 651

TEXT:

... keep current a fleet maintenance program. A fleet manager can define organizations, assembly hierarchies, maintenance **tasks**, **schedules** and parts requirements.

-- Planner lets supervisors organize tasks into **work orders** and track the progress of the repair process. Integrated logistic and planning reports provide the...

13/3,K/56 (Item 1 from file: 634)

DIALOG(R)File 634:San Jose Mercury

(c) 2005 San Jose Mercury News. All rts. reserv.

03600755

AUDITOR'S REPORT CITES INEFFICIENCY IN PARK CARE S.J. STUDY MAKES

RECOMMENDATIONS

SAN JOSE MERCURY NEWS (SJ) - Saturday, December 13, 1986

By: Bert Robinson

Mercury News Staff Writer

Edition: Morning Final Section: Local Page: 1B

Word Count: 279

...estimates of the numbers of workers required.

And he said the city is not tracking **work orders**, which "can result in workers being **assigned** to do a **task** which has already been completed."

Despite the criticism, Assistant City Auditor Jeff Mikles said that...

13/3,K/57 (Item 1 from file: 810)

DIALOG(R)File 810:Business Wire

(c) 1999 Business Wire . All rts. reserv.

0311122 BW030

PORTFOLIO TECHNOLOGIES: Portfolio Technologies announces first shipments of Office.IQ work processing software with graphic workflow capabilities for workgroups

December 18, 1992

Byline: Business Editors & Computer Writers

...processing applications. The software includes application samples and templates for a number of common office **tasks** such as personnel **management**, **work order**

processing, purchase requisition processing, and correspondence tracking.

As the first true work processing solution on...

12/5/1 (Item 1 from file: 347)
DIALOG(R)File 347:JAPIO
(c) 2005 JPO & JAPIO. All rts. reserv.

04894796 **Image available**
FILEUP CONTROL SYSTEM

PUB. NO.: 07-187396 [JP 7187396 A]
PUBLISHED: July 25, 1995 (19950725)
INVENTOR(s): OKITA MINORU
TAKAHASHI KO
FUKUNAGA MASAHIRO
HANAI SEIICHI
SATO SEIYA
KANO TAKEHIRO
APPLICANT(s): FUJITSU LTD [000522] (A Japanese Company or Corporation), JP
(Japan)
APPL. NO.: 05-329196 [JP 93329196]
FILED: December 27, 1993 (19931227)
INTL CLASS: [6] B65G-060/00; G05B-019/418; **G06F-017/60**
JAPIO CLASS: 26.9 (TRANSPORTATION -- Other); 22.3 (MACHINERY -- Control &
Regulation); 45.4 (INFORMATION PROCESSING -- Computer
Applications)

ABSTRACT

PURPOSE: To prevent the occurrence of collapse of a load stack at accumulation time by **scheduling work order** of raw materials so as to gradually become a pyramid shape when product groups created with every raw material are accumulated.

CONSTITUTION: A **work order** indicating means 12 beforehand calculates an arranging range of product groups 5 obtained from respective raw materials 3, and ranks order of the respective raw materials 3 according to a calculated value in the arranging range, and compares dimensions with each other with every order-ranked raw material 3, and detects the raw materials 3 not more than a prescribed rate and ratio, and prevents the occurrence of collapse of a load stack at piling-up time of a raw material pileup 2. Next, a raw material accumulation indicating means 13 creates the raw material pileup 2 in ranked order, and carries the raw materials 3 to a work means 4A from this raw material pileup 2 according to the order, and performs prescribed work. Next, a product pileup indicating means 14 raises the product groups 5 worked from the raw materials 3, and arranges either **end** part, and piles it up as a product pileup 7.

12/5/2 (Item 2 from file: 347)
DIALOG(R)File 347:JAPIO
(c) 2005 JPO & JAPIO. All rts. reserv.

04785608 **Image available**
PRODUCTION CONTROL SYSTEM

PUB. NO.: 07-078208 [JP 7078208 A]
PUBLISHED: March 20, 1995 (19950320)
INVENTOR(s): TATE HARUO
APPLICANT(s): OMRON CORP [000294] (A Japanese Company or Corporation), JP
(Japan)
APPL. NO.: 05-223658 [JP 93223658]
FILED: September 08, 1993 (19930908)
INTL CLASS: [6] **G06F-017/60** ; G05B-019/418; B23Q-041/08
JAPIO CLASS: 45.4 (INFORMATION PROCESSING -- Computer Applications); 22.3

ABSTRACT

PURPOSE: To improve the precision of production planning by outputting a middle **scheduling** in day unit from a production control host, outputting a small **scheduling** whose process order is instructed in hour/minute unit from a manufacturing department server based on the middle **scheduling** and instructing production by issuing a manufacturing order from a site client based on the small **scheduling** .

CONSTITUTION: The production control host 1 inputs order prospect, and outputs the middle **scheduling** that is a material requirements planning, i.e., a planning order in day unit based on the delivery data of the order prospect. Thence, the manufacturing department server 2n performs process **scheduling** processing by referring to a set order when an order is issued, **start** data when the production is **started** , and completion data when it is **completed** fed back from the manufacturing site client 3n, and outputs the small **schedule** plan in hour/minute unit. The manufacturing site client 3n issues a production instruction by instructing order issuance processing, i.e., a dialy **work order** classified by every process or an order application order classified by every process based on the small **scheduling** .

12/5/3 (Item 1 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2005 Thomson Derwent. All rts. reserv.

015684336 **Image available**

WPI Acc No: 2003-746525/200370

XRPX Acc No: N03-598206

Computer system for scheduling work orders for major projects, executes integration software for integrating scheduling of project tasks with scheduling of work orders , to optimize completion of project tasks

Patent Assignee: KINSELLA R (KINS-I)

Inventor: KINSELLA R

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20030171970	A1	20030911	US 2002363578	P	20020311	200370 B
			US 2002185819	A	20020626	

Priority Applications (No Type Date): US 2002363578 P 20020311; US
2002185819 A 20020626

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 20030171970	A1		16	G06F-017/60	Provisional application US 2002363578

Abstract (Basic): US 20030171970 A1

NOVELTY - The computer system executes integration software for integrating **scheduling** of project tasks with **scheduling** of work orders , so as to optimize completion of project tasks .

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for method of integrating maintenance work assignments with project task assignments.

USE - For **scheduling work orders** for major projects such as overhauling of particular units in production facilities.

ADVANTAGE - Provides combined work maintenance and project **scheduling** so as to improve overall effectiveness of project

management, thereby optimizing labor utilization, while accommodating day-to-day variations in maintenance resource allocation.

DESCRIPTION OF DRAWING(S) - The figure shows an illustration of the project display.

pp; 16 DwgNo 7a/7

Title Terms: COMPUTER; SYSTEM; **SCHEDULE** ; WORK; ORDER; MAJOR; PROJECT;
EXECUTE; INTEGRATE; SOFTWARE; INTEGRATE; **SCHEDULE** ; PROJECT; **TASK** ;
SCHEDULE ; WORK; ORDER; OPTIMUM; **COMPLETE** ; PROJECT; **TASK**

Derwent Class: T01

International Patent Class (Main): G06F-017/60

File Segment: EPI

12/5/4 (Item 2 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2005 Thomson Derwent. All rts. reserv.

015683206 **Image available**

WPI Acc No: 2003-745395/200370

XRPX Acc No: N03-597108

Outsourced production scheduling system for factory having surplus order, has data processing module for generating consignment order processing data and processing inspection report of completed work order

Patent Assignee: CHEN C (CHEN-I); CHENG C (CHEN-I); TANG D (TANG-I); WAN X (WANX-I); WEI Y (WEIY-I); XU L (XULL-I)

Inventor: CHEN C; CHENG C; TANG D; WAN X; WEI Y; XU L

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20030154113	A1	20030814	US 200277622	A	20020214	200370 B

Priority Applications (No Type Date): US 200277622 A 20020214

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 20030154113	A1		10	G06F-017/60	

Abstract (Basic): US 20030154113 A1

NOVELTY - A consignment order generated at an order generating module (14), is forwarded to a consignee who satisfies order. A data processing module (112) generates a consignment order processing data and processes inspection data of **completed work order**, after receiving the confirmation of work completion data.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

- (1) outsourced production **scheduling** method; and
- (2) order handling process.

USE - Outsourced production **scheduling** system for production departments or factories.

ADVANTAGE - Enables consigning orders to other companies, when production capacity is small or special manufacturing process is needed. Enables inspecting, accepting or rejecting products online.

DESCRIPTION OF DRAWING(S) - The figure shows the data flowchart for outsourced production **scheduling** system.

order generating module (111)
data processing module (112)
order canceling module (113)
consignee **assigning** module (121)
consignee operating module (131)
pp; 10 DwgNo 2/5

Title Terms: .PRODUCE; **SCHEDULE** ; SYSTEM; FACTORY; SURPLUS; ORDER; DATA;
PROCESS; MODULE; GENERATE; CONSIGNMENT; ORDER; PROCESS; DATA; PROCESS;
INSPECT; REPORT; **COMPLETE** ; WORK; ORDER
Derwent Class: T01
International Patent Class (Main): **G06F-017/60**
File Segment: EPI

12/5/5 (Item 3 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2005 Thomson Derwent. All rts. reserv.

014821115 **Image available**
WPI Acc No: 2002-641821/200269
Related WPI Acc No: 2003-156334
XRPX Acc No: N02-507246

**Communication method for disparate hosts and order processing system used
in business management involves synchronizing information associated with
one of orders in number of servers operating in system**

Patent Assignee: ELECTRONIC DATA SYSTEMS CORP (ELDA-N)

Inventor: BRANDT R A; KARDOS C P; XIONG B

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 6430562	B1	20020806	US 99260859	A	19990301	200269 B

Priority Applications (No Type Date): US 99260859 A 19990301

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 6430562	B1	34		G06F-017/30	

Abstract (Basic): US 6430562 B1

NOVELTY - Responses to orders are received from an order processing system (16). Each response is associated with corresponding order. Status of orders is updated based on the responses. The updated status of orders is then made available to hosts (12). Information associated with one of the orders is then synchronized in number of servers (130,132) operating in order processing system when one of orders is canceled.

DETAILED DESCRIPTION - Orders from a relational database table structure of a shared message handler (14) are transmitted to the order processing system. Disparate hosts generate orders. The orders from each host are transmitted to the shared message handler using the relational database statements. The orders at the shared message handler are stored in the relational database table structure using the relational database statements. INDEPENDENT CLAIMS are also included for the following:

(a) a message handler for communicating between disparate hosts and order processing system;

(b) and a resource management system.

USE - For communicating between disparate hosts and order processing system used in business management.

ADVANTAGE - Prevents **work order** and **scheduling** messages from being lost during periods of network or other system failure. Allows multiple types of work, such as customer **initiated** work, planned maintenance, door postings, and one call **work orders** to be **assigned** and tracked using single system. Improves ability to track **work orders** and determine their status, allowing utility to improve its overall levels of customer service.

DESCRIPTION OF DRAWING(S) - The figures show the block diagrams of

integrated resource management system using the method for communicating between disparate hosts and order processing system used in business management.

Hosts (12)
Message handler (14)
Order processing system (16)
Servers (130,132)
pp; 34 DwgNo 1A, 1B/11

Title Terms: COMMUNICATE; METHOD; DISPARITY; HOST; ORDER; PROCESS; SYSTEM;
BUSINESS; MANAGEMENT; SYNCHRONISATION; INFORMATION; ASSOCIATE; ONE; ORDER
; NUMBER; SERVE; OPERATE; SYSTEM
Derwent Class: T01
International Patent Class (Main): G06F-017/30
International Patent Class (Additional): G06F-015/16; G06F-017/60
File Segment: EPI

12/5/6 (Item 4 from file: 350)

DIALOG(R) File 350:Derwent WPIX
(c) 2005 Thomson Derwent. All rts. reserv.

014172817 **Image available**

WPI Acc No: 2001-657045/200175

Related WPI Acc No: 2001-648590; 2001-657018; 2001-657042; 2001-657043;
2001-657044; 2002-017512; 2002-279897

XRPX Acc No: N01-489759

**System for scheduling complex work orders for a work-force of
mobile service technicians by use of distinct suborder requests for
completing complex orders**

Patent Assignee: MDSI MOBILE DATA SOLUTIONS INC (MDSI-N); JACOBS S (JACO-I)

Inventor: JACOBS S

Number of Countries: 094 Number of Patents: 003

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200175694	A2	20011011	WO 2001CA423	A	20010402	200175 B
AU 200146273	A	20011015	AU 200146273	A	20010402	200209
US 20020010615	A1	20020124	US 2000193705	P	20000331	200210
			US 2000193832	P	20000331	
			US 2000193833	P	20000331	
			US 2000193834	P	20000331	
			US 2000193917	P	20000331	
			US 2001824849	A	20010402	

Priority Applications (No Type Date): US 2000193917 P 20000331; US
2000193705 P 20000331; US 2000193832 P 20000331; US 2000193833 P 20000331
; US 2000193834 P 20000331; US 2001824849 A 20010402

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

WO 200175694 A2 E 59 G06F-017/60

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA
CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP
KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT
RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR
IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW

AU 200146273 A G06F-017/60 Based on patent WO 200175694

US 20020010615 A1 G06F-017/60 Provisional application US 2000193705

Provisional application US 2000193832
Provisional application US 2000193833
Provisional application US 2000193834

Abstract (Basic): WO 200175694 A2

NOVELTY - A data structure (10) includes an order identifier (20) indicating a complex **work order**, a set of fields identifying features of the complex **work order** and a set of **suborders** (40) that are part of the complex **work order**. Each **suborder** includes an identifier and a set of precedence criteria (60) relating the **suborders** to each other.

DETAILED DESCRIPTION - The data structure **schedules** or **assigns** individual orders in a work-force management system in order to satisfy the criteria.

INDEPENDENT CLAIMS are included for a data structure, for a process for creating a complex **work order** and for a computer readable medium with instructions.

USE - Managing **work order scheduling** including multiple **tasks**.

ADVANTAGE - Management of complex **tasks**.

DESCRIPTION OF DRAWING(S) - The drawing shows the data structure

Data structure (10)

Identifier (20)

Suborders (40)

Criteria (60)

pp; 59 DwgNo 1/10

Title Terms: SYSTEM; **SCHEDULE**; COMPLEX; WORK; ORDER; WORK; FORCE; MOBILE;

SERVICE; TECHNICIAN; DISTINCT; REQUEST; **COMPLETE**; COMPLEX; ORDER

Derwent Class: T01

International Patent Class (Main): G06F-017/60

File Segment: EPI

12/5/7 (Item 5 from file: 350)

DIALOG(R) File 350:Derwent WPIX

(c) 2005 Thomson Derwent. All rts. reserv.

014172816 **Image available**

WPI Acc No: 2001-657044/200175

Related WPI Acc No: 2001-648590; 2001-657018; 2001-657042; 2001-657043; 2001-657045; 2002-017512; 2002-279897

XRFX Acc No: N01-489758

Order scheduling system for scheduling appointments over multiple days when identifying a service request from a customer as a splittable work order

Patent Assignee: MDSI MOBILE DATA SOLUTIONS INC (MDSI-N); ANTHONY R

(ANTH-I); JACOBS S (JACO-I); THOMAS J (THOM-I)

Inventor: ANTHONY R; JACOBS S; THOMAS J

Number of Countries: 094 Number of Patents: 003

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200175693	A2	20011011	WO 2001CA422	A	20010402	200175 B
AU 200146272	A	20011015	AU 200146272	A	20010402	200209
US 20020010610	A1	20020124	US 2000193705	P	20000331	200210
			US 2000193832	P	20000331	
			US 2000193833	P	20000331	
			US 2000193834	P	20000331	
			US 2000193917	P	20000331	
			US 2001825296	A	20010402	

Priority Applications (No Type Date): US 2000193917 P 20000331; US 2000193705 P 20000331; US 2000193832 P 20000331; US 2000193833 P 20000331

; US 2000193834 P 20000331; US 2001825296 A 20010402

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

WO 200175693 A2 E 57 G06F-017/60

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA
CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP
KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT
RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR
IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW

AU 200146272 A G06F-017/60 Based on patent WO 200175693

US 20020010610 A1 G06F-017/60 Provisional application US 2000193705

Provisional application US 2000193832

Provisional application US 2000193833

Provisional application US 2000193834

Provisional application US 2000193917

Abstract (Basic): WO 200175693 A2

NOVELTY - An order **scheduling** system component (202) allows an order **scheduling** system client (204) to **schedule** splittable and non-splittable **work orders** for providing services to customers (206). A request from a customer is identified as being a splittable **work order**, which is **assigned** a job duration required to **complete** the order and a split time that is less than the job duration.

DETAILED DESCRIPTION - An appointment window is determined for the days and the **work order** is **assigned** to the windows.

INDEPENDENT CLAIMS are included for a method of **scheduling** splittable **work orders** and for a computer readable medium with a program.

USE - **Scheduling** appointments to provide customer services over multiple days.

ADVANTAGE - Enhanced efficiency for efficient utilization of resources.

DESCRIPTION OF DRAWING(S) - The drawing shows the system

System component (202)

Clients (204)

Customers (206)

pp; 57 DwgNo 2/4

Title Terms: ORDER; **SCHEDULE**; SYSTEM; **SCHEDULE**; MULTIPLE; DAY; IDENTIFY
; SERVICE; REQUEST; CUSTOMER; SPLIT; WORK; ORDER

Derwent Class: T01

International Patent Class (Main): G06F-017/60

File Segment: EPI

12/5/8 (Item 6 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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011444155 **Image available**

WPI Acc No: 1997-422062/199739

XRPX Acc No: N97-351554

Schedule pipe processing method for multistage production - involves storing information on issue, operator, termination schedule time and information on completion probability of work, in every work series

Patent Assignee: HITACHI LTD (HITA)

Number of Countries: 001 Number of Patents: 002

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
JP 9190470	A	19970722	JP 961901	A	19960110	199739 B

JP 3276834 B2 20020422 JP 961901 A 19960110 200234

Priority Applications (No Type Date): JP 961901 A 19960110

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 9190470	A		14	G06F-017/60	
JP 3276834	B2		13	G06F-017/60	Previous Publ. patent JP 9190470

Abstract (Basic): JP 9190470 A

The method involves controlling the **schedule** of series of work which are performed manually by using certain operators, based on predetermined work sequence. The operator of each **work order** in the work series stores the past work hours and the work hours log file for every work series. An issue designates the completion of the work series and corresponds to a new request from a requesting person. The past work hours of the same work series is searched from the work hours log file. When the work based on newly requested issue **starts** at an arbitrarily designated time, the culmination of the work in the same work series is calculated based on the probability of completion. For every work series, a **schedule** table stores the information on the issue, the operator, the **termination schedule** time and the information on the completion probability of the work.

If the **starting schedule** of the present work in the work series of the requested issue is not **assigned** to arbitrary designated time, then the operator without any work in the **start schedule**, is corresponded. The work of the newly requested issue is registered into an assignment and the **schedule** table. During **start** of the **schedule**, the completion probability (f2) of the issue is compared with the completion probability (f1) of the newly requested work. If $f2 \geq f1$, then the work of the newly requested issue is registered as the work succeeding for the next **start schedule**. If $f2 < f1$, then the work of the newly requested issue is registered as the preceding work for **assigning** to **start schedule** and storing in the **schedule** table.

ADVANTAGE - Calculates completion probability, effectively. Enables to learn urgency of each issue, instantaneously.

Dwg.3/15

Title Terms: **SCHEDULE** ; PIPE; PROCESS; METHOD; MULTISTAGE; PRODUCE; STORAGE; INFORMATION; ISSUE; OPERATE; **TERMINATE** ; **SCHEDULE** ; TIME; INFORMATION; **COMPLETE** ; PROBABILITY; WORK; WORK; SERIES

Derwent Class: T01

International Patent Class (Main): **G06F-017/60**

File Segment: EPI

13/3,K/1 (Item 1 from file: 349)
DIALOG(R) File 349:PCT FULLTEXT
(c) 2005 WIPO/Univentio. All rts. reserv.

01181440 **Image available**

**AUTOMATED UTILITY SUPPLY MANAGEMENT SYSTEM INTEGRATING DATA SOURCES
INCLUDING GEOGRAPHIC INFORMATION SYSTEMS (GIS) DATA.**
**SYSTEME DE GESTION AUTOMATIQUE DE LA FOURNITURE DE SERVICES PUBLICS A
SOURCES DE DONNEES INTEGREES COMPRENANT DES DONNEES DE SYSTEMES
D'INFORMATIONS GEOGRAPHIQUES (GIS)**

Patent Applicant/Inventor:

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Legal Representative:

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Patent and Priority Information (Country, Number, Date):

Patent: WO 2004104891 A1 20041202 (WO 04104891)
Application: WO 2004US14416 20040507 (PCT/WO US04014416)
Priority Application: US 2003440089 20030519

Designated States:

(All protection types applied unless otherwise stated - for applications
2004+)

AE AG AL AM AT AU AZ BA BB BG BR BW BY BZ CA CH CN CO CR CU CZ DE DK DM
DZ EC EE EG ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC
LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NA NI NO NZ OM PG PH PL PT RO
RU SC SD SE SG SK SL SY TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW
(EP) AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LU MC NL PL PT RO
SE SI SK TR
(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG
(AP) BW GH GM KE LS MW MZ NA SD SL SZ TZ UG ZM ZW
(EA) AM AZ BY KG KZ MD RU TJ TM

Publication Language: English

Filing Language: English

Fulltext Word Count: 18331

Main International Patent Class: G06F-017/60

Fulltext Availability:

Detailed Description

Detailed Description

... types of utility networks, traces networked features that are targeted
directly to utility customer's task, creates custom trace reports,
provides a complete outage management sub-system, provides a complete
set of web tools for managing crews, creates work orders, for
managing outages and outage callbacks, for viewing, for searching the
GIS, for controlling security...orders
Interfaces to clients' inventory system for picking list
Automatic archiving of work orders

Tracks work orders from start to finish
Module G-5 Outage Management Solution
[00971 The UtilityCenter™ 10's Outage Management Solution provides the
tools and functionality necessary...

13/3,K/2 (Item 2 from file: 349)

DIALOG(R)File 349:PCT FULLTEXT

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01064162 **Image available**

SYSTEM FOR MANAGING REAL ESTATE PROPERTIES

SYSTEME DE SECURITE ET DE GESTION DE BIENS

Patent Applicant/Inventor:

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(Residence), GB (Nationality)

Legal Representative:

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Atlanta, GA 31156-7685, US,

Patent and Priority Information (Country, Number, Date):

Patent: WO 200393931 A2-A3 20031113 (WO 0393931)

Application: WO 2003US13434 20030430 (PCT/WO US03013434)

Priority Application: US 2002377013 20020430

Designated States:

(Protection type is "patent" unless otherwise stated - for applications
prior to 2004)

AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ

EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR

LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SC SD SE SG

SK SL TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

(EP) AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LU MC NL PT RO SE
SI SK TR

(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG

(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW

(EA) AM AZ BY KG KZ MD RU TJ TM

Publication Language: English

Filing Language: English

Fulltext Word Count: 11491

Main International Patent Class: G06F-017/60

Fulltext Availability:

Claims

Claim

... property management customization by setting up posts
within the buildings and locations within the buildings, **scheduling**
tasks to be completed, developing tours for personnel, and developing
incidents and items;
C. creating at...

...custornization by the
personnel through remote devices so as to allow the personnel to obtain
work
orders fro'm the system database and to input information to the system
database; and
e...

...property management custornization by setting up posts

within the buildings and locations within the buildings, **scheduling tasks** to be completed, developing tours for personnel, and developing incidents and items;
C. creating at...

...customization by the
personnel through remote devices so as to allow the personnel to obtain
work orders from the system database and to input information to the system
database;
e. providing for...

13/3,K/3 (Item 3 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
(c) 2005 WIPO/Univentio. All rts. reserv.

01043222 **Image available**

**SUITE OF CONFIGURABLE SUPPLY CHAIN INFRASTRUCTURE MODULES FOR DEPLOYING
COLLABORATIVE E-MANUFACTURING SOLUTIONS**
**SUITE DE MODULES D'INFRASTRUCTURE CONFIGURABLES POUR CHAÎNE
D'APPROVISIONNEMENT PERMETTANT DE DEPLOYER DES SOLUTIONS DE FABRICATION
ELECTRONIQUE COLLABORATIVE**

Patent Applicant/Assignee:

ROCKWELL AUTOMATION INC, 1201 South Second Street, Milwaukee, WI 53204,
US, US (Residence), US (Nationality), (For all designated states
except: US)

Patent Applicant/Inventor:

TROY Thomas A, 109 Addison Lane, Lansdale, PA 19446, US, US (Residence),
US (Nationality), (Designated only for: US)
KALL Jonathan J, 170 Shea Lane, Glenmoore, PA 19343, US, US (Residence),
US (Nationality), (Designated only for: US)
MCCARTHY Robert J, 181 Dans Lane, Downingtown, PA 19335, US, US
(Residence), US (Nationality), (Designated only for: US)

Legal Representative:

NEIFELD Richard Ph D (agent), Neifeld IP Law, P.C., Suite 1001, 2001
Jefferson Davis Highway, Arlington, VA 22202, US,

Patent and Priority Information (Country, Number, Date):

Patent: WO 200373196 A2-A3 20030904 (WO 0373196)
Application: WO 2003US1087 20030206 (PCT/WO US03001087)
Priority Application: US 2002354151 20020206

Designated States:

(Protection type is "patent" unless otherwise stated - for applications
prior to 2004)

AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ
EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR
LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SK
SL TJ TM TN TR TT TZ UA UG US UZ VN YU ZA ZM ZW
(EP) AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LU MC NL PT SE SI
SK TR
(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW
(EA) AM AZ BY KG KZ MD RU TJ TM

Publication Language: English

Filing Language: English

Fulltext Word Count: 12677

Main International Patent Class: **G06F-017/60**

Fulltext Availability:

Detailed Description

Detailed Description

... to disposition WIP to scrap, rework, inventory, or next work center on route. The Lot **Start** /Complete further enforces data collection, material issue, and disposition requirements established for each **work order** . Containerization is used to provide the ability to **assign** WIP or Inventory items to a container in order to support bulk transaction processing.

Inventory...and further prints labels on demand or automatically based upon an event (i.e., the **start** or completion of a **work order**). Finally, Label **Manager** store labels in a central location to reduce maintenance and deployment costs.

Data Archiver Module...

13/3,K/4 (Item 4 from file: 349)

DIALOG(R)File 349:PCT FULLTEXT

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00991461 **Image available**

PLANNING, SCHEDULING AND ALLOCATION OF MRO RESOURCES

PLANIFICATION, ORDONNANCEMENT ET ATTRIBUTION DE RESSOURCES MRE

Patent Applicant/Assignee:

ACCENTURE GLOBAL SERVICES GMBH, Geschäftshaus Herrenacker 15, CH-8200 Schaffhausen, CH, CH (Residence), CH (Nationality)

Inventor(s):

WETZER Michael, 631 Marlin court, Redwood City, CA 94065, US,
GARROW Gary R, 810 East Harvard, Burbank, CA 91501, US,
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WEIR Patrick E, 1726 Anza Street, Apartment #5, San Francisco, CA 94118, US,
ASHBY Gary, 92 St. John's Road, Sevenoaks, Kent TN13 3NE, GB,
NEWTON Charles P III, 1279 Crooked Stick Drive, Rock Hill, SC 29730, US,

Legal Representative:

MCLEISH Nicholas Alistair Maxwell (et al) (agent), Bould Wade Tennant, Verulam Gardens, 70 Gray's Inn Road, London WC1X 8BT, GB,

Patent and Priority Information (Country, Number, Date):

Patent: WO 200321504 A2 20030313 (WO 0321504)

Application: WO 2002EP9884 20020902 (PCT/WO EP0209884)

Priority Application: US 2001946032 20010904

Designated States:

(Protection type is "patent" unless otherwise stated - for applications prior to 2004)

AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ
EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR
LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI
SK SL TJ TM TN TR TT TZ UA UG UZ VN YU ZA ZM ZW

(EP) AT BE BG CH CY CZ DE DK EE ES FI FR GB GR IE IT LU MC NL PT SE SK TR

(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG

(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW

(EA) AM AZ BY KG KZ MD RU TJ TM

Publication Language: English

Filing Language: English

Fulltext Word Count: 7202

Main International Patent Class: G06F-017/60

Fulltext Availability:

Detailed Description

Detailed Description

... system and method for managing the maintenance, repair or overhaul of equipment and for planning, **scheduling** and allocating the resources required for the maintenance **tasks** . The system, in one embodiment includes a resource data processor controller that includes a resource... transmits output data concerning the optimized plan to one or more of facilities reservations, personnel **work order** , material kits orders and tool/equipment order systems.
1 5 The method, in one embodiment...

13/3,K/5 (Item 5 from file: 349)

DIALOG(R)File 349:PCT FULLTEXT

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00991458 **Image available**

MAINTENANCE, REPAIR AND OVERHAUL MANAGEMENT

GESTION DE L'ENTRETIEN, DES REPARATIONS ET DE L'EXPLOITATION

Patent Applicant/Assignee:

ACCENTURE GLOBAL SERVICES GMBH, Geschäftshaus Herrenacker 15, CH-8200 Schaffhausen, CH, CH (Residence), CH (Nationality)

Inventor(s):

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GARROW Gary R, 810 East Harvard, Burbank, CA 91501, US,
WEST David P II, 119 Greenridge, Newman, GA 30265, US,
WEIR Patrick E, Apartment #5, 1726 Anza Street, San Francisco, CA 94118, US,

NEWTON Charles P III, 1308 Westmont Court, Southlake, TX 76092, US,

ASHBY Gary, 92 St. John's Road, Sevenoaks, Kent TN13 3NE, GB,

Legal Representative:

McLEISH Nicholas Alistair Maxwell (et al) (agent), Boulton Wade Tennant, Verulam Gardens, 70 Gray's Inn Road, London WC1X 8BT, GB,

Patent and Priority Information (Country, Number, Date):

Patent: WO 200321501 A2 20030313 (WO 0321501)

Application: WO 2002EP9880 20020902 (PCT/WO EP0209880)

Priority Application: US 2001946093 20010904

Designated States:

(Protection type is "patent" unless otherwise stated - for applications prior to 2004)

AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ
EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR
LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI
SK SL TJ TM TN TR TT TZ UA UG UZ VN YU ZA ZM ZW

(EP) AT BE BG CH CY CZ DE DK EE ES FI FR GB GR IE IT LU MC NL PT SE SK TR

(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG

(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW

(EA) AM AZ BY KG KZ MD RU TJ TM

Publication Language: English

Filing Language: English

Fulltext Word Count: 28756

Main International Patent Class: **G06F-017/60**

Fulltext Availability:

Detailed Description

Detailed Description

... a kit is set up and the kit is issued.

The seventh sub-process is **Initiate** Re-Planning and Re- **Scheduling** per Unplanned **Work Orders** 3020 If at any time unplanned work is

identified, a baseline plan needs to be...on a regular basis.
Improvements should be made around efficiency and effectiveness of the standard **work order** templates as it applies to work execution and **management**. Inputs for improvements can be **initiated** by endusers' inputs (e.g., mechanics, technicians, supervisors, etc.) or through ... are defined.

Finally, since the each maintenance task is dependent on a work order, each **task** will be grouped to a **work orders** and maintenance **schedule** for periodic/planned execution.

The seventh sub-process is Define Default **Work Orders** 4010 Default WO 03/021501 PCT/EP02/09880 **task** and **managing** the relationship. That is, for a given **task**, what are the sets of supporting documents required to enable proper execution and completion of the **task**?

The eleventh sub-process is Plan Maintenance **Schedule** 4010 This sub-process refers to the activities around the planning of a maintenance schedule...

13/3,K/6 (Item 6 from file: 349)

DIALOG(R)File 349:PCT FULLTEXT

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00863542 **Image available**

ENTERPRISE ASSET MANAGEMENT SYSTEM AND METHOD

SYSTEME ET PROCEDE DE GESTION DES AVOIRS D'UNE ENTREPRISE

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Patent and Priority Information (Country, Number, Date):

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Priority Application: US 2000212234 20000616; US 2001288827 20010505

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ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT
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TR TT TZ UA UG US UZ VN YU ZA ZW

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Fulltext Availability:

Detailed Description

Detailed Description

... calculation.

However, tracking costs incurred in repairing and maintaining these assets can be an onerous **task**. In a typical procedure to service assets, a store **manager** first calls a service provider to perform a **task** on an asset. The service provider performs the task required, seeks approval for the work, and then fills out **work order** papers in triplicate. The **work order** papers are typically distributed (one copy each) to the enterprise headquarters, the store, and the...

...the enterprise headquarters. if the accounts payable department of the enterprise headquarters can locate the **work order** papers, the invoice may be entered into the system and paid. If the **work order** papers cannot be found, the invoice may be sent to the store manager for approval...

13/3,K/7 (Item 7 from file: 349)

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00845267

CONFIGURABLE SCHEDULING SYSTEM

SYSTEME DE PROGRAMMATION POUVANT ETRE CONFIGURE

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TR TT TZ UA UG US UZ VN YU ZA ZW
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR
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Detailed Description

Detailed Description

... additional workers. To improve scheduling and dispatching, many service providers have an automated or computerized **scheduling** system carry out these **tasks**. Conventional **scheduling** systems typically perform the **scheduling** and dispatching **tasks** through the use of various algorithms that account for many factors in assigning a mobile worker to service 1 5 a customers **work order**, such as time availability, skill sets, geographic area, duration of each **work order**, travel time, and the like. Thus, using scheduling systems such as these allow for a service provider to more efficiently utilize their mobile workers in satisfying customer **work orders**.

Although scheduling systems have reduced the difficulty a service provider faces in scheduling and dispatching...

13/3,K/8 (Item 8 from file: 349)
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00842013 **Image available**

METHODS AND SYSTEMS FOR SCHEDULING COMPLEX WORK ORDERS FOR A WORKFORCE OF MOBILE SERVICE TECHNICIANS
PROCEDES ET SYSTEMES PERMETTANT DE PROGRAMMER DES ORDRES DE TRAVAIL COMPLEXES POUR UNE MAIN-D'OEUVRE DE TECHNICIENS DE SERVICE MOBILE

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LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM
TR TT TZ UA UG US UZ VN YU ZA ZW

(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR
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Detailed Description

Claims

Detailed Description

... by reference.

TECHNICAL FIELD

The invention relates to computer implemented processes and systems for scheduling **work order** assignments to members of a mobile workforce, and particularly to **managing work order scheduling** when the **work order** assignments include multiple **tasks** such that the performance of one task is dependent on the completion of a prior **task**.

BACKGROUND OF THE INVENTION

Managing the **scheduling** and distribution of **work orders** to a SUBSTITUTE SHEET (RULE 26) technician can be scheduled to complete- any of the three types of **work orders** in any sequence to fill that technicians work shift. Independent scheduling allows a WMS to schedule the **work orders** in a manner that is most efficient for the a technician and for the workforce...

...the workforce.

Another factor impacting efficiency is customer appointment time. It is often desirable to **schedule** the **start** of a **work order** to occur in a fixed appointment time window as required by a customer. This poses

...pin and all technicians end their shifts at 5:00 pm, then a two-hour **work order** 02 cannot be **scheduled** to **start** after 0, because there would not be sufficient time to complete the order. It would...

...connect the cable to the box until the cable is available.

The scheduling of complex **work orders** is not adequately addressed by existing WMSs. Such systems typically treat **work orders** as independent work assignments that can only be scheduled as discrete units without regard to their relationship to any other **work order**. If an order is a complex **work order**, a separate entry must be made in the WMS for each discrete **sub - order** in a procedural manner that ensures each required **work order** will be completed in the proper sequence. Such a process is inefficient, prone to error, and produces scheduling solutions that are undesirable. For example, one complex **work order** requiring three independent **suborders** taking one-half hour to complete may take three days to finish, because each independent **sub - order** is entered into the WMS on three different days to ensure that one order is

...therefore, a need in the art for data structures, processes and systems for managing complex **work orders**.

SUMMARY OF THE INVENTION

A complex **work order** is a task to be performed by one or more members of a work force, which requires two or more related **work orders** to be completed typically in a prescribed or preferred order. Provided herein are a data structure, processes and systems to manage complex **work orders** to facilitate efficient SUBSTITUTE SHEET (RULE 26) call waiting); or more typically, ensuring that the time of start and completion of separate **sub - orders** for the same premise is accomplished in a productive sequence (for example, ensuring that one...

...of a cable before another technician arrives to install a cable box). Coordination of complex **work orders** also encompasses resource allocation, scheduling, assignment and/or optimizing the distribution of **work orders** to members of a workforce.

The data structure provided herein relates the **work orders** of a complex **work order** as a set of **sub - orders** that are further related to one another by information common to those **sub - orders** (that is, certain order information is shared between the **sub - orders**) and by precedence criteria that identify and state the start and/or completion times of one **sub - order** with respect to another. For example, a complex **work order** requiring six **work orders** to complete would include the set of **sub - orders** 01, 02, 03, 04, 05, and 06. The precedence criteria might be that both 01...

...common area, common customer name and address, and/or the same appointment date and time. **Sub - orders** are brought together by their relationship to a complex **work order**, however, each **sub - order** retains information specifically associated with that **sub - order**. For example, each **sub - order** may have different job codes, be of different types, have different job durations, or might...

...skill levels or equipment to be completed.

The data structure for managing a complex **work order** is stored on 91 computer readable media. The data structure includes an identifier for a **work order** that indicates it is a complex **work order**; a set of N common fields that identify features of the complex **work order** and a set of M member **sub - orders** that are part of the complex **work order**. The member **sub - orders** include an identifier for the member **sub - order** and a set of P precedence criteria where the precedence criteria identifies a predecessor **sub - order** to be started or completed prior to starting the member **sub - order**. The precedence criteria may also include successor **sub - orders** to be started after the current member **sub - order**. The data structure also typically includes a set of Q fields containing specific information for the member **sub - orders**.

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Data structures containing records for complex **work orders** may be stored in a database on computer readable medium. The member **sub - orders** can be selected from a database containing records of ordinary orders that contain all the necessary information for each **sub - order** including information for the Q specific fields.

The precedence criteria minimally identify at least one...

...included in the Q specific fields.

Also provided herein are processes for creating the complex **work**

order data structure in a computer system that contains instructions for communicating data regarding the complex **work order** to a workforce management system (WMS). Other processes include communicating a proposed **start** time for commencing work on a member **sub - order** to the WMS configured with a data structure that stores the precedence criteria for the member **sub - orders** and validating whether the proposed start time satisfies the precedence criteria prior to starting work on the member **sub - order**. A typical start time proposal comes from a technician via wireless communication, where the technician...

...start time typically by transmitting an on-site or en-route message regarding the member **suborder** to the WMS. Validating a proposed start time includes checking that precedence criteria have been...

...signal indicates the start time or completion time for a SUBSTITUTE SHEET (RULE 26) predecessor **sub - order**. Validating the -proposed start time may include sending a warning or alert signal to a...

...is typically a visual display (for example a flashing signal) that identifies the current member **sub - order** and may optionally include an identification of the predecessor **sub - order** that has not been completed.

The warning or alert signal might have one appearance indicating...
...a second appearance indicating the precedence criteria is not satisfied.

Also provided are processes for **managing** a complex **work order** that include **scheduling** appointment times for **starting** work on each member **sub - order** so that the appointment times satisfy the precedence criteria for each member **sub - order**.

This is done at least in part, by communicating data concerning complex **work orders** to a WMS that performs scheduling operations. The WMS uses the complex **work order** data structure to validate whether the precedence criteria is satisfied prior to scheduling one or more of the **sub - orders** for the complex **work order**. Scheduling processes optionally include assessing the duration of time required to complete the member **sub - orders** and travel times for technicians to arrive on-site for a given **suborder**. Scheduling may include fixed appointment time scheduling, appointment time window scheduling or resource allocation scheduling. Typically, appointment windows are negotiated with a customer for one or more **sub - orders**. Resource allocation scheduling is an open form of scheduling where time is set aside from include optimizing routines for scheduling **work orders** to a workforce where the **work orders** include complex **work orders**. An example of such a process includes identifying first and second **sub - orders** required to fulfill the complex order; relating the first **sub - order** to the second **suborder** by a precedence criteria; scheduling the first **sub - order** to a first appointment time for starting work; scheduling the second **sub - order** a second appointment time for starting work so that the first appointment time and the...

...first new appointment
SUBSTITUTE SHEET (RULE 26)
time is selected for the first or second **sub - order** and a

determination is made whether the appointment time for the other **sub - order** requires reassignment to satisfy the precedence criteria. If not, the first new appointment time will be scheduled for the first **work order**. If so, the other **sub - order** is rescheduled to a second new appointment time so that the resulting scheduled appointment times for the first and second **sub - orders** satisfy the precedence criteria. Typically, this process is repeated a number of times to yield...

...a valid complex work order.

Figure 6 illustrates a process of scheduling a plurality of **sub - orders** for a complex **work order**.

Figure 7 illustrates example **sub - order** scheduling results for a complex **work order**.

Figure 8 illustrates another example **sub - order** scheduling result for a complex **work order**.

Figure 9 illustrates a process for scheduling sub-orders for a complex routine.

DETAILED DESCRIPTION...

...complex work order (where N is > 1). Also included is a set of M member **suborders** 40 that are part of the complex **work order** (where M is > 1). Each (or at least one) of the member **sub - orders** 40 includes: an identifier 50 for the member **suborders**, a set of P precedence criteria 60 that relate one member **sub - order** to other member **sub - orders** by identifying the **sub - orders** that are to be started or completed prior to starting a given **sub - order** (where P is > 0). The precedence criteria minimally includes an identifier for predecessor or successor **sub - orders** 64, and may include various sub fields 66 and 68 to farther define the precedence...

...includes a set of Q specific fields 70 containing specific information for the individual **sub - orders** (where Q is > 0). Also, the data structure may include an indication for the type of **sub - order** 80.

The complex **work - order** identifier 20 is any representation that identifies the complex **work order**, for example, a complex **work order** number or name. The N common fields 30 typically include data that relate the member **sub**
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orders of the complex **work order** to a common place, business unit, service area, customer name and the like. The **sub - order** identifier 50 typically includes a name or number for each of the related **sub - orders**. The **sub - order** identifier 50 may be a special identifier reserved for **sub - orders** that are part of a complex **work order**. More typically, **sub - order** identifier 50 is an identifier for an ordinary **work order**, which, when included with the set of M member **sub - orders**, becomes a component of a complex **work order**. In this sense, the ordinary **work order** is considered "promoted" to inherit the data features of a complex **work order**. An ordinary **work order** identifier for a **sub - order** is particularly useful when a service provider has an existing database of ordinary **work orders** that can be used to assemble a complex **work order**.

For example, installing a new cable and activating a requested cable service might require ordinary...

...s database and each ordinary order may carry its own Q specific fields. A complex **work order** can be created by selecting and assigning the ordinary orders NC and CS into the set of M member **sub - orders** , relating the **sub - orders** to one another by a precedence criteria, and providing the complex **work order** identifier 20, for example "NCS. In this example, the **sub - orders** would "inherit" the common information for the complex. The Q specific fields 70 typically include sub fields specifying features of the individual **sub - orders** . Example features specified in the Q specific fields include skill level of the technician required, equipment required, estimated duration of the **work order** , the identity of a specific technician or other desired information.

The Q specific fields may be limited to the fields of ordinary **work orders** , or may be user configured specifically for complex **work orders** . Separate configuration of the Q specific fields is useful when the performance of a **sub - order** is altered by being associated with a complex **work order** . This may occur, for example, when the combination of separate **sub - orders** into a complex **work order** reduces the duration of The order type field 80 includes information that facilitates management of different types of **sub - orders** based on how they are treated by an

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I 0

automated...

...scheduled in discrete portions for completion at different times. In the data structure provided herein. **work orders** of any type can be integrated into a complex **work order** , however, program instructions for entering data for a complex **work order** will provide an error message if an order type is inconsistent with a precedence criteria for itself or another member **sub - order** .

1 5 For example, undated sub-order types cannot have predecessors and cannot be predecessor...from a resource pool of service technician time so that work orders can be fulfilled, **scheduling** appointment windows and **start** times for completing **work orders** , **assigning work orders** to individual technicians, optimizing the **scheduling** of **work orders** so as to minimize costs to the enterprise, communicating work orders to dispatchers and to field service technicians, receiving input regarding the **start** and completion time of work orders, generating summary reports and generally tracking the progress of **work order** fulfillment by a work force.

Example workforce **management** systems include, but are not limited to, versions of the ADVANTEXrm system available from Mobile...

...RULE 26) complex work order to the WMS 150 configured with COM 200. The member **suborders** may be entered de novo 445 or selected from a database 450 that stores information for ordinary **work orders** . In addition, entries for the Q specific fields 460 for each member **sub - order** may be made de novo 445 or imported from the database 450 that stores such information regarding ordinary **work orders** . Ordinarily a request to create a complex **work order** also includes entry of the common features in the N common fields 470.

As mentioned...communicated to COM 200 through a variety of means.

Turning now to Figure 5. complex **work order** creation may further include various acts of verification. COM 200 inspects each member of the set of M **sub - orders** and performs a preliminary verification. The complex order creation is 'dered valid at this stage...

...true: (1) the complex order
consi

recognizes the identifier for each of the M member **sub - orders** 510;
(2) there aren't more precedence relationships or **sub - orders** than are permitted by the configuration of the particular system in which COM 200 resides 520; (3) each identified predecessor or successor **sub - order** is within the set of M **sub - orders** in the same complex order 530; (4) the precedence criteria are logically valid 540 (e...

...verification can occur in any sequence and may optionally occur during the process of complex **work order** creation as appropriate, for example, verification of a recognizable **sub - order** can occur immediately after the identifier for such a **sub - order** is entered.

In certain embodiments, the appointment time or appointment time window for one or more of the **sub - orders** is determined by negotiation with the customer. In these embodiments, the WMS typically provides an...

...workforce availability to the CRS 1 10 (or other personnel) during the process of complex **work order** creation. Where a complex **work order** request includes an appointment time for starting the complex **work order** as a whole (i.e., in the N common fields) or for starting one or more of the member **sub - orders** (i.e., in the Q specific fields) COM 200 may further send a message to...

...to validate whether a schedule can be constructed to satisfy all precedence criteria for all **suborders** of the complex **work order** based on workforce availability with respect to the selected appointment time 560. If not, a...

...message will be transmitted to the TB with an error message 565 indicating that complex **work order** cannot be accomplished with the selected appointment time. If a complex **work order** is valid, COM 200 sends messages to the WMS 150 to create a set of **work orders** representing each member **sub - order** in a manner that satisfies all the precedence criteria 570. If COM 200 receives confirmation from the WMS 150 that all **sub - orders** have been successfully created COM 200 sends an acknowledgment (ACK) message to the TB.

If...

...200.

Allocating time is that aspect of scheduling which sets aside blocks of time while **scheduling** also includes **assigning tasks** to the allocated blocks of time. **Scheduling** may also include other related **tasks**, such as **assigning tasks** to particular technicians or optimizing the order or distribution of assignments for a single technician...

...Figure 6 illustrates a general process of allocating time or scheduling a plurality of member **sub - orders** for a complex **work order** created by a WMS 150 configured with COM 200. COM 200 breaks the complex **work order** into the set of M **work orders** 610. For each ith **sub - order** the WMS 150 selects a start time, appointment time window, or allocates time resources 620...

...a start time or appointment time window has been selected for any of the ilh **sub - orders** (for example, by having a predetermined appointment time window), or in N common fields that start time or appointment time window will be used for that **sub - order**. The predecessor **sub - order** for the it' member **suborder** is then obtained from the precedence criteria and the predecessor **sub - order** is assigned a time also based on the workforce resources 630. The assigned appointment times...repeated until the precedence criteria is satisfied 650.

When the start times for the ilh **sub - order** and all of its predecessor **sub - orders** have been selected and validated, the process repeats for each of the M member **sub - orders** in the complex **work order** until each **sub - order** has been scheduled 660. If initial selection of appointment times for the predecessor **sub - orders** does not satisfy the precedence criteria, new appointment times are selected and tried 680. If ...

...so that the CRS or other personnel can 4 @negotiate" appointment time windows for each **sub - order** to satisfy the precedence criteria.

Any of the sub-orders can be selected as a...

...and reliable. Under more typical circumstances, a variety of factors make it impractical to schedule **work orders** for fixed times, for example, customer unavailability at a fixed time, traffic delays, unforeseen delays in the completion of earlier **work orders**, urgent **work orders** requiring priority attention and the like. It is more practical, therefore, for the WMS 150...
...range from the earliest to the latest time a technician will arrive to start a **sub - order**.

Figure 713 illustrates an alternative practice where the WMS 150 configured with COM 200 schedules...

...time windows rather than fixed start times to satisfy the precedence criteria for a complex **work order**. The plurality of appointment time windows 730 are illustrated by segments whose widths represent the...
...from the earliest 735 to latest 736 time a technician should arrive to service a **sub - order**. In this embodiment, the appointment time windows for each of the **sub - orders** are scheduled so that the earliest start time for each member **sub - order** is no earlier than the latest start time for the immediate
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predecessor **sub - order** plus the duration f.i.e. DI, D2, D0 for completing each member **sub - order**, which is illustrated by the shaded areas 740 on the work day time line 700...

...sub-order.

While the scheduling process illustrated in Figure 7B provides more flexibility in scheduling **sub - orders** than fixed time scheduling, it does not take advantage of those occasions where **sub - orders** can be started and completed early in an appointment time window. For example, if 0...

...in turn provides more options for increasing work force efficiency (for example by inserting additional **work orders** such as emergency **work orders** or undated **work orders** into an existing schedule).

Figure 8 illustrates an alternative practice where the WMS 150 configured with COM 200 schedules overlapping appointment time windows for a plurality of **sub - orders** 300 to fulfill the precedence criteria. In this example, the complex **work order** includes **sub - orders** 1A, 1B, 2, 3A, 3B and 4. The WMS 150 schedules a plurality of appointment site for each **sub - order** . In this example, each member **sub - order** 1A and 1B have precedence criteria that identify null predecessor **sub - orders** meaning that these **sub - orders** do not have predecessor **sub - orders** . Alternatively, or in addition, the precedence criteria for each of 1A and 1B identify the other as a **sub - order** that can be started simultaneously or at any time with respect to each other. The precedence criteria for **sub - order** 2 identifies **sub - orders** 1A and 1B as predecessor **sub - orders** that must be started or completed before **sub - order** 2 is started. The precedence criteria for **sub - order** 3A and 3B identify **sub - orders** 1A, 1B and 2 as predecessors, and optionally identify each other as simultaneous **sub - order** orders. The precedence criteria for **sub - order** 4

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identifies 1A, 1B, 2, 3A, and 3B as predecessor **sub - orders** . Because the earliest start time for each **sub - order** satisfies the precedence criteria with respect to the earliest start time for each predecessor **sub - order** , this selection of appointment time windows satisfies the precedence criteria for each scheduled order, therefore...

...to be scheduled whenever available from the workforce. In addition to being useful for scheduling **work orders** with large appointment time windows, the scheduling process depicted in Figure 8 is able to satisfy precedence criteria that include overlapping **suborders** , i.e., where a member **sub - order** can start at a time before the completion, but after the start of one or more of its predecessor **sub - orders** .

The scheduling process depicted in Figure 8 can result in occasions where a technician is...

...the WMS 150 configured with COM 200 by evaluating the actual start times of predecessor **sub - orders** . As explained in more detail in the Appendix, the WMS is typically configured to receive an input from technicians at both the start and completion of any **work order** . This input includes timestamps indicating the respective times of start and completion. When a technician sends a start time for a predecessor **sub - order** , the WMS 150 configured with COM 200 calculates the estimated completion time of that predecessor...

...with COM 200 selects a new start time (or appointment time window) for the successor **sub - order** , that will satisfy the precedence criteria, and sends a validation signal to the technician 160...

...dispatcher 140 may recognize that a technician is scheduled to start work on a predecessor **sub - order** but not yet completed it, and enter a proposed start time to reschedule the successor **sub - order** . Rescheduling a complex **work order** is described in more detail in the Appendix.

Other processes provided by a complex **work order** data structure include optimizing routines where the scheduling of the **sub - orders** in a complex **work order** includes scheduling appointment times for each **sub - order** in manner that satisfies the precedence criteria and provides an overall schedule for an individual...

...used with WMSs, that provide algorithms for assigning appointment time windows for a plurality of **work orders** to set daily schedules for a workforce.

Such processes include assigning work orders to individual...

...versions of the ADVANTEX system provided by NMSI.

Figure 9 illustrates a process for scheduling **sub - order** assignments for a complex **work order** using an optimizing routine that rearranges appointment time windows. This process includes identifying first and second **sub - orders** required to fulfill the complex order 910 and relating the first **sub - order** to the second **sub - order** by a precedence criteria 920, for example, by creating a complex **work order** as discussed above. The process further includes scheduling the first **sub - order** to a first appointment time window and scheduling the second **sub - order** to a second appointment time window, so that the first appointment time window and the second...

...the process further includes selecting a first new appointment time for the first or second **sub - order** 940 determining whether the appointment time window for the other of the first or the second **sub - order** requires reassignment to satisfy the precedence criteria with respect to the first new Xappointmenttime 950, then rescheduling the first or second **sub - orders** to the first new appointment time and if required, rescheduling the second **sub - order** to a second new appointment time, so that the resulting rescheduled appointment times for the first and second **sub - orders** provides a new solution that satisfies the precedence criteria 960. Optionally, the process is reiterated...

...time, and/or increases the overall yield in productivity, e.g., by providing that more **work orders** can be completed in a day.

Figure 10 graphically illustrates an example result of the above process for scheduling **sub - order** assignments for a complex **work order**. In this example **suborders** 0, and 02 are components of a complex **work order**, where 0, must be completed before 02, and these are to be added to a schedule that includes a plurality of ordinary **work orders** WO, WO Y and WO, 980 distributed across a workday time line 700. The width of the **sub - orders** and **work orders** correspond to the duration of
SUBSTITUTE SHEET (RULE 26)
the orders. In the initial scheduling...

...the WMS may be configured to return to the original schedule 930 without reassigning either **sub - order**.

The above example is discussed with respect to appointment times, however, the same process can...

...time resources.

For purposes of clarity, Figure 10 is illustrated with only one reassignment of **sub - orders**, without any rescheduling of the ordinary **work orders**, and with only two scheduling solutions 930 and 960 that fulfill the precedence criteria. In practice, the optimization process would also include several different reassignments of the **sub - orders**, several reassignments of the ordinary **work orders**, and several scheduling solutions that satisfy the precedence criteria. The number of scheduling solutions can...

...the number of total orders to be scheduled, the number of precedence relationships for complex **work orders**, as well as the computational limits of the computer performing the steps. The best (or...
...invention as it may be embodied in one or more practices.

Complex Order Cancellation

Complex **work orders** can be cancelled as whole when TB sends a complex order cancellation message to COM identifying the complex **work order** number: If none of the **sub - orders** have been completed, COM cancels all of the **sub** orders and sends a complex order cancellation message to TB. If at least one **suborder** is complete, COM sends a complex order partial completion message to TB.

COM cancels all of the remaining **sub - orders** and sends a complex order partial completion message to TB. Similarly, complex **work orders** can be cancelled when COM receives a cancellation message for a **sub - order** sent by a dispatcher or technician. Unlike a cancellation request from TB, dispatchers and technicians usually initiate the cancellation by sending a message to cancel only a **sub - order** to the WMS. Because the **sub - order** is associated with a complex **work order**, WMS sends the **sub order** cancellation message to COM. When COM receives a **sub - order** cancellation message from the WMS, if all of the other **sub - orders** for the complex order are cancelled, COM sends the complex order cancellation message to TB. If at least one **sub - order** has been completed, COM will send a complex **work order** partial completion message to TB. If at least one of the other **sub - orders** for the complex order is not complete or cancelled, COM takes no action with respect to TB, i.e., the remaining **sub - orders** remain active.

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Complex Order Completion

The WMS is ordinarily configured to...

...from technicians. When technicians transmit order completion forms (or any message indicating completion of a **sub - order**) the WMS sends a **sub - order** completion message to COM. When COM receives an order completion message for a **sub - order**, if all of the **sub - orders** for the complex order are completed, then COM sends a complex order completion message to...

...order completion message contains the complex order number (identifier), and for each of the M **suborders**, the **sub - order** number (identifier) and specific data regarding the work on that **sub - order**, such as the timestamps for the original dispatch, when it was manually acknowledged by the...

...technician called ahead, was en-route, onsite, and the actual time of completion of the **sub - order**. If at least one of the other **sub - orders** for the complex order is not complete or cancelled, COM takes no action with respect to TB so the complex **work order** remains active but is updated with **suborder** completion data. There is no limit to the number of forms (or amount of data) that can be sent for any **sub - order**. When all **sub - orders** have received a completion message, a complex **work order** completion message is sent to the TB which can then archive the complex **work order**.

Complex Order Partial Completion

If a **sub - order** completion message is sent to COM, and at least one **sub - order** has been cancelled, COM sends a complex order partial

completion message to TB. This message contains the complex work order number (identifier) and for each of the M sub - orders , the sub - order number (identifier,) and an indication of whether that sub - order was completed or cancelled, and specific data concerning the completion of each sub - order .

Complex Order Modification

Once created. comp@lex work orders can also be modified when a complex order modification message is sent to COM. The...

...is

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similar to the creation request. It has the same complex work order identifier and

message format. A complex work order modification request differs from a

rescheduling request (discussed hereafter) because certain features of the complex In complex work order modification, all information is provided for all sub - orders (i.e., the order modification must specify the complete set of information that defines all sub - orders and their relationships). COM breaks the complex order modification down and validates the modification as in complex order creation.

COM ensures that the sub - orders are properly defined and that precedence criteria are valid for the current set of sub - orders . If the complex work order has already been scheduled, and some sub - orders have been completed or cancelled, the precedence criteria of such complete or cancelled sub - orders cannot be modified. The precedence criteria for sub - orders that are not complete or cancelled can be modified, and may still be related to those sub - orders that have been completed or cancelled.

For each sub - order that is canceled from the complex work order , the

sub - order will also be cancelled within the WMS if the order is not already complete or...

...more such cancellations will result in the overall cancellation or partial completion of the complex work order . COM will then process the complex order as described as for partially completed or cancelled as discussed. In certain embodiments, a cancelled sub - order need not be cancelled, but

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may be "demoted" back to the level of an ordinary work order . This may be beneficial, for example, when the demoted sub - order still requires completion, but such completion is not a requirement for fulfilling all the precedence criteria in the complex work order .

For each sub - order that is added to the complex work order , if the suborder is already existing within the WMS as an ordinary work order , and not restricted from being part of a complex work order for specific reasons (e.g., an undated order or other special order that is not compatible with complex work order requirements) the WMS ordinary work order will be "promoted" and become a subI 0 order of the complex order. The promoted order will inherit the complex order number and any necessary precedence relationships. The newly promoted sub - order will be immediately modified based on the information in the complex order modification message. If the sub - order does not already exist within the WMS as a regular order, the order will be created as a sub - order of the complex order with the 5 relevant precedence criteria.

In dealing with complex **work order** modification messages, COM will validate precedence criteria, and verify that invalid fields (such as appointment...

...If valid, COM will then perform the required modifications, additions, cancellations, or promotions for each **sub - order** . If there is a non fatal error modifying, adding, canceling, or
ZD
promoting one or more **sub - orders** (for example, if an order that was to be modified is already complete), COM will continue the modification request and still modify, add, cancel, or promote the other **sub - orders** in the complex **work order** as requested.

Alternatively, if any of the requests to ...changed (appointment date, appointment start time, appointment end time, expiry time, appointment type). A complex **work order** cannot be rescheduled to undated. COM will do as much of the processing above as it can, even if the processing for one or more **sub - orders** results in an error.

COM will ACK, NACK, and report errors in the same manner...before, WDS is a WMS provided by MDSI with capabilities for scheduling and assigning ordinary **work orders** to individual technicians in a work force. For **sub - orders** of a complex **work order** , WDS scheduled, in-day, runner/floater, auto-dispatch, re-distribute, and forecast functions operate as they do in versions without complex **work order** features, except a **suborder** will not be assigned to a technician unless all of its predecessors have been assigned and there is an expectation (based on **sub - order** duration) that all of its predecessors will be complete by the time the technician is scheduled to go on-site for the **sub - order** .

When a technician is considered as part of the WDS run (i.e., when the... been satisfied, and the order number of the offending predecessor sub-order.

A new complex **work order** report will appear at the end of the ordinary report. The report will be turned...

...off based on the value of a parameter 1 5 in wd.ini. The complex **work order** report will include the following information for each complex order: complex order number; total number of **sub - orders** ; total number of assigned **sub - orders** (i.e., **sub - orders** that are not pending or cancelled). For each **sub - order** : the report includes: **sub - order** number; an indication of whether the **suborder** was considered in the WDS run; an indication of whether the **sub - order** is assigned (i.e., not pending or cancelled); and the predecessor **sub - order** numbers. The report will only include complex orders in the report if the WDS run considered one of its **sub - orders** for assignment
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Claim

1 A data structure stored on computer readable media for managing a complex **work order** , comprising
an identifier for a **work order** that indicates it is a complex **work order** ;
a set of N common fields that identify features of the complex **work order** , where N is > 1;

a set of M member **sub - orders** that are part of the complex **work order** ,
where M is > 1 , and where the member **sub - orders** in the set include an identifier for the member **sub - order** , a set of P precedence criteria, where P is > 0 , and where the precedence criteria identifies a predecessor **sub - order** to be started or completed prior to starting the member **sub - order** ; and

2 The data structure of claim 1 where the set of M member suborders...

...on the member sub-order.

16 In a computer, a process for creating a complex **work order** comprising,
SUBSTITUTE SHEET (RULE 26)
identifying a **work order** as a complex **work order** by an identifier;
selecting a set of M member **sub - orders** associated with the complex.
The process of claim 16 further including identifying a set of Q fields containing specific information for the M member **sub - orders** , where Q is > 0 ; and entering the Q specific fields into the data structure.
18...

...each M member sub-orders.

19 In a computer, a process for managing a complex **work order**
ZD
comprising,
identifying a **work order** as a complex **work order** ;
selecting a set of M member **sub - orders** associated with the complex
SUBSTITUTE SHEET (RULE 26)

20 The process of claim 19 further...the proposed start time for the member sub-order to a technician if the proposed **start** time is validated.

30 In a computer, a process for **managing** a complex **work order** comprising,
identifying a **work order** as a complex **work order** ;
selecting a set of M member **sub - orders** associated with the complex **sub - order** .

31 The process of claim 30 further including validating whether the precedence criteria is satisfied...

...precedence criteria is not satisfied.

42 In a computer, a process for managing a complex **work order** comprising,
identifying first and second **sub - orders** required to fulfill the complex order;
relating the first **sub - order** to the second **sub - order** by a precedence criteria;
scheduling the first **sub - order** to a first appointment time for starting SUBSTITUTE SHEET (RULE 26)
scheduling the second - **sub - order** a second appointment time for starting work so that the first appointment time and the...

...satisfy the precedence criteria;
selecting a first new appointment time for the first or second **sub - order** ;
determining whether the appointment time for the other of the first or the second **sub - order** requires reassignment to satisfy the precedence criteria with
respect to the first new appointment time, and
rescheduling the first or second **sub - orders** to the first new appointment time and if required, rescheduling the second **sub - order** to a second new I 0 appointment time, so that the resulting scheduled appointment times for the first and second **sub - orders** satisfy the precedence criteria.

43 The process of claim 42 further including identifying a set...

...of technicians as a whole.

50 A system for managing distribution of a plurality of **work orders** to a workforce of mobile service representatives comprising;
means for communicating a request for **work orders** that include complex **work orders** to a computer system that includes a data structure for identifying a **work order** as a complex **work order** , where the data structure includes,
an identifier for the complex order;
a set of N common fields that identify features of the complex **work order** , where N is > 1 ;
a set of M member **sub - orders** that are part of the complex completed prior to starting the member **sub - order** , and where P is > 0 , and optionally including set of Q fields containing specific information for the **sub - orders** , where Q is > 0 .
means for communicating a completion signal indicating completion of predecessor **suborders** from a mobile service technician to a workforce
management system stored on computer readable media,
...the workforce
management system to a worker who proposes a start time for a member **sub - order** to
the workforce management system, where the workforce management system validates whether the selected start time satisfies the precedence criteria for the member **sub - order** with respect to the whether the P predecessor **sub - orders** have been completed.

51 The system of claim 50 where the means of communicating between...

...for a complex work order.

53 A system for managing distribution of a plurality of **work orders** to a workforce of service representatives comprising;
a workforce management system stored on computer readable medium that is configured with a data structure for identifying a **work order** as a complex
work order including,
an identifier for the complex **work order** ;
a set of N common fields that identify features of the complex criteria that relate a member **sub - order** to **suborders** that are to be started or completed prior to starting the member **sub - order** , and where P is > 0 , and optionally including set of Q fields containing specific information for the **suborders** , where Q is > 0 .
a first wireless data communication device configured to transmit a

completion signal indicating completion of the predecessor **suborders**
from to the 54. The svstem of claim 5 3 wherein the workforce management
I...

13/3,K/9 (Item 9 from file: 349)

DIALOG(R)File 349:PCT FULLTEXT

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00842012 **Image available**

ORDER SCHEDULING SYSTEM AND METHOD FOR SCHEDULING APPOINTMENTS OVER
MULTIPLE DAYS

SYSTEME ET PROCEDE DE PROGRAMMATION D'ORDRE PERMETTANT DE FIXER DES
RENDEZ-VOUS SUR PLUSIEURS JOURS

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Patent and Priority Information (Country, Number, Date):

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AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE
ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT
LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM
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(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR

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Main International Patent Class: G06F-017/60

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Claims

Claim

... 47. A server computer system for scheduling splittable work orders,
the system comprising an order **scheduling** component adapted to receive
requests for **scheduling** splittable work orders from client computer
systems, the **scheduling** component being operable responsive to a client
computer **initiating** a request to **schedule** a splittable work order

to **assign** to the splittable **work order** a job duration required to 5 complete the order and a split time that is...

...on a first day during which a portion of the service to complete the the **scheduled work order**.

48 The server computer system of claim 47 wherein requests **initiated** from the client computers and information about the **scheduled work order** are formulated into message packets adapted to be communicated over a communications network including the...

13/3,K/10 (Item 10 from file: 349)

DIALOG(R)File 349:PCT FULLTEXT

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00837966 **Image available**

SYSTEMS AND METHODS FOR PROVIDING REMOTE SUPPORT VIA PRODUCTIVITY CENTERS
SYSTEMES ET PROCEDES PERMETTANT D'APPORTER UNE TELEASSISTANCE PAR
L'INTERMEDIAIRE DE CENTRES DE PRODUCTIVITE

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Patent and Priority Information (Country, Number, Date):

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EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS
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Fulltext Availability:

Detailed Description

Detailed Description

... work queue. At II 3, the work is performed followed by the associate
closing the **work order** at 114. Once the work is done, the j ob
database is updated at I...

...a task needing skill level I but a skill level 1 associate will not be
assigned to any **tasks** requiring level 2 or three skills. The entries
in Table 2 also show the associates...

...available for each associate and monitors when each associate is out of

the office, attending **scheduled** meetings, or tied up with an unfinished **task** from the previous shift. Associates are also preferably **assigned** to customer teams. The solver 44B attempts to assign primary team members to a job...

13/3,K/11 (Item 11 from file: 349)

DIALOG(R)File 349:PCT FULLTEXT

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00837965 **Image available**

TECHNICAL SUPPORT PROGRAM

PROGRAMME DE SUPPORT TECHNIQUE

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Detailed Description

Detailed Description

... and assignment of maintenance actions 162.

The plan 152 is the foundation for the maintenance management 164 wherein standard jobs 166 are used for tasks due 168 on work orders 170 and requested work 172. The work orders 170 lead to a work schedule 178. From the management 164, the maintenance work 180...

13/3,K/12 (Item 12 from file: 349)

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00837961 **Image available**

MENU DRIVEN MANAGEMENT AND OPERATION TECHNIQUE

GESTION PILOTEE PAR MENU ET TECHNIQUE DE FONCTION

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Fulltext Availability:
Detailed Description

Detailed Description
... assignm-ment of maintenance actions 162.

The plan 152 is the foundation for the maintenance management 164 wherein standard jobs 166 are used for tasks due 168 on work orders 170 and requested work 5 172. The work orders 170 lead to a work schedule 178. From the management 164, the maintenance work 180...and assignment of maintenance actions 162.

The plan 152 is the foundation for the maintenance management 164 wherein standard jobs 166 are used for tasks due 168 on work orders 170 and requested work 172. The work orders 170 lead to a work schedule 178. From the management 164, the maintenance work 180...

13/3,K/13 (Item 13 from file: 349)
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00829948 **Image available**
WORKFLOW SYSTEM AND BUILDER OFFERS IMAGE SCRIPT TOOLS ON INPUT DATA TYPE
SYSTEME ET GENERATEUR DE FLUX DE TRAVAUX OFFRANT DES OUTILS DE SCRIPT
D'IMAGES SUR LE TYPE DE DONNEES ENTREES

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Patent and Priority Information (Country, Number, Date):

Patent: WO 200163529 A1 20010830 (WO 0163529)

Application: WO 2001US5712 20010223 (PCT/WO US0105712)

Priority Application: US 2000184570 20000224; US 2001791124 20010222

Designated States:

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AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE
ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT
LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM
TR TT TZ UA UG UZ VN YU ZA ZW
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR

(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW
(EA) AM AZ BY KG KZ MD RU TJ TM
Publication Language: English
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Fulltext Word Count: 3222

Main International Patent Class: **G06F-017/60**

Fulltext Availability:

Detailed Description

Detailed Description

... provides the information that the system needs to reason over how to create a workflow **management** procedures and dynamically generated user interfaces.

1 5 In the **Work Order** Creation component, the creation of the workflow **management** procedure is **initiated** by the user identifying the desired output product and the desired input products. The user...

...6 on a SUN I 0 workstation. The system integrates the following subsystems.

1 . Manual **Work Order** Creation - the user interface for creation and execution of workflow management procedures and abstracted templates (called profiles);

2. Event Driven **Work Order** Creation - a command-line interface for creation and execution of workflow management procedures;

3. **Work Order** Interpreter - the logic engine that reasons over needed inputs and outputs and available tools to...

...the workflow management procedure;

4. Run Control - the runtime control engine that analyzes the workflow **management** procedure for parallelism and creates the commands to execute the **tasks** ;

5. **Scheduler** - the process **management** control executive that oversees process execution on each host, provides real-time and logged status...

13/3,K/14 (Item 14 from file: 349)

DIALOG(R) File 349:PCT FULLTEXT

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00807445 **Image available**

DYNAMIC AIRCRAFT MAINTENANCE MANAGEMENT SYSTEM

SYSTEME DE GESTION DYNAMIQUE DE MAINTENANCE D'AERONEF

Patent Applicant/Assignee:

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Legal Representative:

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Patent and Priority Information (Country, Number, Date):

Patent: WO 200141024 A1 20010607 (WO 0141024)
Application: WO 2000US32832 20001201 (PCT/WO US0032832)
Priority Application: US 99168400 19991201

Designated States:

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AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE
ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT
LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM
TR TT TZ UA UG US UZ VN YU ZA ZW
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR
(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW
(EA) AM AZ BY KG KZ MD RU TJ TM

Publication Language: English

Filing Language: English

Fulltext Word Count: 13909

Main International Patent Class: G06F-017/60

Fulltext Availability:

Detailed Description

Detailed Description

... task.

FIG. 7 illustrates example graphical user interface (GUI)

140 used in conjunction with tracking **manager** 24. GUI 140 is an example " **Tasks Due**" screen 140 of system 10. Screen 140 shows, in real-time, a list...

...to the current status. Screen 140

assists the user in developing the best plan and **work order** for an aircraft to insure that tasks are completed in a timely manner.

SUBSTITUTE SHEET...aircraft tail number 282, task number 284, bar code 286

corresponding to task number 284, **work order** number 288, zone number 290, sequence number 292, estimated hours 294, actual hours accrued 296, suggested number of crew members 298, skill required 300, crew numbers 302 of crews **assigned** to **task**, current date 304, 15 station number 306, and discrepancy or task description 308.

GUI...

13/3,K/15 (Item 15 from file: 349)

DIALOG(R)File 349:PCT FULLTEXT

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00799899 **Image available**

SYSTEM AND METHOD FOR AUTOMATED FINANCIAL PROJECT MANAGEMENT
SYSTEME ET PROCEDE DE GESTION DE PROJET FINANCIER AUTOMATISE

Patent Applicant/Assignee:

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Patent and Priority Information (Country, Number, Date):

Patent: WO 200133477 A2-A3 20010510 (WO 0133477)
Application: WO 2000US41898 20001103 (PCT/WO US0041898)
Priority Application: US 99163506 19991104

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ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT
LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM
TR TT TZ UA UG UZ VN YU ZA ZW

(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR

(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG

(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW

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Fulltext Word Count: 12492

Main International Patent Class: G06F-017/60

Fulltext Availability:

Detailed Description

Detailed Description

... are created against the previously approved
funding and begin with the creation of a project **task** that **assigns** a
portion of the approved budget to a specific trade. In order to create a
project **task** for a
commitment, the project **manager** selects the new document icon (281 in
1 0 Figure 3) to create the task...bid, waived bid, negotiated, national
contract), the type of
commitment (e.g., purchase order, contract, **work order**) the tax
status of the
commitment (e.g., taxable, nontaxable) and a detailed description of...

13/3,K/16 (Item 16 from file: 349)

DIALOG(R)File 349:PCT FULLTEXT

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00784159

**A SYSTEM, METHOD AND ARTICLE OF MANUFACTURE FOR REMOTE DEMONSTRATION OF
BUSINESS CAPABILITIES IN AN E-COMMERCE ENVIRONMENT**

**SYSTEME, PROCEDE ET ARTICLE DE FABRICATION DESTINES A LA DEMONSTRATION A
DISTANCE DES CAPACITES COMMERCIALES DANS UN ENVIRONNEMENT DE COMMERCE
ELECTRONIQUE**

Patent Applicant/Assignee:

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Patent and Priority Information (Country, Number, Date):

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Application: WO 2000US24272 20000831 (PCT/WO US0024272)

Priority Application: US 99388026 19990831

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AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE GH GM
HR HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX
NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG UZ VN YU ZW
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE
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(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW
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Fulltext Word Count: 63151

Main International Patent Class: **G06F-017/60**

Fulltext Availability:

Detailed Description

Detailed Description

... request to Network Planning

116

network configuration ready (including identifier if successful), to
Service Configuration **work order** to Network Inventory **Management**
(if any physical work is necessary)

start monitoring request to Network Data Management

network configuration request to lower-level management
Output data...

...Input TH

work order from Network Planning and/or Network Provisioning
change notification from Element **Manager**

work order (**start** /stop/cancel) from Network Maintenance &
Restoration

117

start monitoring request to Network Data Management
new/spare / repair part available from Supplier
equipment problems...

...element faults/ events from Element Managers

regular/preventative maintenance requirements from Network Planning
maintenance activity **start** /complete from Network Inventory

Management

performance degradation indication from Network Data **Management**
Output Triggers

work order (**start** /stop/cancel) to Network Inventory **Management**
configuration and restoration requests to Network Provisioning
service or SLA affecting network problem and resolution...

13/3,K/17 (Item 17 from file: 349)

DIALOG(R)File 349:PCT FULLTEXT

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00775307 **Image available**

**A SYSTEM, METHOD AND COMPUTER PROGRAM FOR DETERMINING CAPABILITY LEVELS OF
PROCESSES TO EVALUATE OPERATIONAL MATURITY OF AN ORGANIZATION
SYSTEME, PROCEDE ET ARTICLE DE FABRICATION DESTINES A DETERMINER DES
NIVEAUX DE CAPACITE D'OPERATIONS POUR DES BESOINS D'EVALUATION
D'OPERATION DANS UNE RECHERCHE DE MATURITE OPERATIONNELLE**

Patent Applicant/Assignee:

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Patent and Priority Information (Country, Number, Date):

Patent: WO 200108037 A2-A3 20010201 (WO 0108037)
Application: WO 2000US20353 20000726 (PCT/WO US0020353)
Priority Application: US 99361338 19990726

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AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE GH GM
HR HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX
NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZW
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE
(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG
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Fulltext Word Count: 86229

Main International Patent Class: G06F-017/60

Fulltext Availability:

Detailed Description

Detailed Description

... documented and available for verification activities.

GP2.7 Employ version control to manage changes to **work** products.
Place identified work products under version control, or configuration
management to provide a means...this practice embodies the pro-active
planning of personnel. This includes the selection of proper **work**
forces, training, and dissemination.

31

GP 3.4 Provide feedback in order to maintain knowledge...Assessment
Indicators

at Client

Performance GP2.1 Establish and maintain Policy regarding deployment and
the

Management a policy for performing synchronized efforts of other
process
operational **tasks** areas is established and followed.

GP2.2 Allocate sufficient All deployment personnel have access to
resources to meet software tools, **schedules**, and feedback
expectations necessary in order to complete their **tasks**.

GP23 Ensure personnel Training policy is in place for new
receive the appropriate type deployment personnel...

13/3,K/18 (Item 18 from file: 349)

DIALOG(R) File 349: PCT FULLTEXT

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00775305 **Image available**

A **SYSTEM, METHOD AND COMPUTER PROGRAM FOR DETERMINING CAPABILITY LEVEL OF PROCESSES TO EVALUATE OPERATIONAL MATURITY IN AN ADMINISTRATION PROCESS AREA**

SYSTEME, PROCEDE ET ARTICLE MANUFACTURE DE VERIFICATION D'UN PROCESSUS A MATURITE OPERATIONNELLE PAR DETERMINATION DU NIVEAU D'APTITUDE DANS UN DOMAINE DE PROCESSUS TRAITEMENT D'ADMINISTRATION UTILISATEUR

Patent Applicant/Assignee:

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(Residence), US (Nationality), (For all designated states except: US)

Patent Applicant/Inventor:

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US (Residence), US (Nationality), (Designated only for: US)

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(Residence), US (Nationality), (Designated only for: US)

Legal Representative:

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Patent and Priority Information (Country, Number, Date):

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Application: WO 2000US20238 20000726 (PCT/WO US0020238)

Priority Application: US 99360928 19990726

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AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE
ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT
LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM
TR TT TZ UA UG US UZ VN YU ZA ZW

(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE

(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG

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Main International Patent Class: **G06F-017/60**

Fulltext Availability:

Detailed Description

Detailed Description

... the extent to which the execution of the process is managed in order to produce **work** products within a stated time and resource requirement. The related Generic Practices are.

GP2.1...Assessment

Indicators

at Client

Performance GP2.1 Establish and maintain A documented policy is maintained, that

Management a policy for performing describes procedures for requesting operational **tasks** changes, time-frames for implementing changes, and change reporting requirements.

GP2.2 Allocate sufficient Adequate resources...Assessment

Indicators

at Client

Performance GP2.1 Establish and maintain Policy regarding deployment and

the

Management a policy for performing synchronized efforts of other process operational **tasks** areas is established and followed. GP2.2 Allocate sufficient All deployment personnel have access to resources to meet software tools, **schedules**, and feedback expectations necessary in order to complete their **tasks**.

GP2.3 Ensure personnel Training policy is in place for new receive the appropriate type deployment personnel regarding...

13/3,K/19 (Item 19 from file: 349)

DIALOG(R) File 349:PCT FULLTEXT

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00772919 **Image available**

AUTOMATIC WORK PROGRESS TRACKING AND OPTIMIZING ENGINE FOR A TELECOMMUNICATIONS CUSTOMER CARE AND BILLING SYSTEM
MOTEUR DE SUIVI ET D'OPTIMISATION D'ACTIVITE AUTOMATIQUE POUR UN SYSTEME DE SERVICE A LA CLIENTELE ET DE FACTURATION DE TELECOMMUNICATIONS

Patent Applicant/Assignee:

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Patent Applicant/Inventor:

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Legal Representative:

BECKERS J Randall, Staas & Halsey LLP, Suite 500, 700 Eleventh Street, N.W., Washington, DC 20001, US

Patent and Priority Information (Country, Number, Date):

Patent: WO 200106426 A1 20010125 (WO 0106426)

Application: WO 99US16442 19990726 (PCT/WO US9916442)

Priority Application: US 99354084 19990715

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AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZW

(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE

(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG

(AP) GH GM KE LS MW SD SL SZ UG ZW

(EA) AM AZ BY KG KZ MD RU TJ TM

Publication Language: English

Filing Language: English

Fulltext Word Count: 10662

Main International Patent Class: **G06F-017/60**

Fulltext Availability:

Detailed Description

Claims

Detailed Description

... the Invention

The present invention is directed to a system for work progress tracking and **management** and, more particularly, to a system for

assigning tasks to a workforce, optimizing the scheduling of the tasks ,
 1 5 with automatic rescheduling of the tasks while insuring the completion
 of the tasks before the desired completion date and utilizing the...

...optimization on a regular basis This system should also operate without significant manual intervention and schedule tasks based on several constraints

SUMMARY OF THE INVENTION
 It is an object of the present...

...0 of the system in the area of "stability zones" representing time periods in which assigned tasks may not be rescheduled These stability zones are based on parameters the user specifies and...rescheduled, it would be desirable to insulate the customer from changes, i e "lock" the task where such dependency exists, and schedule around it Another example of locking is scheduling against a given date, e g customer...

...described in detail later, together with pictorial representation The other aspect of stability of the schedule is the flexibility to "lock" tasks (either dependencies or delivery dates) so as to make internal schedule changes transparent 5 to the customer
 It is still a further object of the present...

...of composed activities small, and avoid gaps in work pool utilization activities typically comprise several tasks The system schedules as many of the tasks in parallel as possible, thus producing the shortest possible critical path for the overall composed 2 When a worker is assigned to a task the worker is not available for other activities That worker is used to 1 00...

...pool since they are in the same geographic area and possess the same skills The scheduling
 Page 1 1
 system assigns tasks to resource pools Assignment of worker names to resources is done shortly before the task is due to start such as a day earlier Tasks are assigned based on roles first, e g Technician I (where I refers to the skill level...

...organizing a set of activities into an "optimal" order, based on the parameters supplied The scheduling of each task takes into account dependencies, priority, duration, staff availability per job category (work pool), and material ...

...runs are started for all orders in the system
 An internal order (10") consists of sub - orders and internal order positions Internal orders can cross more than one regional location A dependency...

...either from an external system or an internally generated order by the telecommunications provider
 A sub - order ("SO") consists of internal order positions

An internal order position ("IOP") consists of **work orders** and tasks and can be dependent on other IOPs
A **work order** ("WO") consists of **work orders** and tasks
Dependencies to other **work orders** can also exist
A time slot is a period of time in which activities can...

...five minutes In general,

Page 13

one task has a unique time slot If a **task** is longer than the time slot, the **task** is **assigned** to several time slots For example, a **task** has a process time of 3 hours, but time slots have duration of 2 hours...

...the middle of the second time

slot It should be noted that no mutually dependent **tasks** are **assigned** to the same time slot This is done to prevent a situation where a task...

...intervention Activities are the basic components in the present inventions

Constraints are directly related to **scheduling of tasks**
Examples of constraints include time constraints indicating starting and finishing times, precedence constraints indicating that...

...to an internal order 10 ("IO") Internal orders 10 are divided into several types of **sub - orders** 20 ("SO") and internal order positions 30 ("IOP") The **sub - orders** 20 may then be further divided into additional IOP's 30 and the IOP's 30 may in turn be divided into additional **work orders** 40 ("WO") Finally, WO's 40 may be divided into one or more tasks 50...

...If there is a

gap of two hours and the online system 101 needs to **schedule** a two hour **task**, it would fill this gap Gaps are defined as "installation gaps", obviously a company would...

...to fill in gaps in stability zone 66, but not to take out or move **tasks** already **scheduled** This is done to minimize changes in stability zone 66 and insure no sudden and...

...assign

activities Hence, this zone 68 is not stable with respect to 1 5 rescheduling **Work orders** may be rescheduled in order to produce the optimum schedule possible The typical length of...actual completion time per task

For Example, the online system 1 0 1 could have **tasks**

Page 24

scheduled for the afternoon which are dependent on the completion of morning tasks If the actuals...workflow engine 185 detects a new request and puts the newly modified order through the **scheduling** engine in the offline run, which results in **task** X starting on 6/5 A clean up occurs when the workflow engine 185 detects a new/modified **task** and runs it through the **schedule** engine 170 The **schedule** engine 170 corrects the inconsistencies and contradictions This checking and clean up function of the...

...expressions evaluate to "true" If a

branch is evaluated to true then the tasks and **work orders** contained within the branch are automatically added to the workflow

Page 27

Scheduling Input

Each...without workforce intervention They
get executed in real time or near real time These automatic **tasks** are
not **scheduled** in "time slots" since these automatic **tasks** are
entirely

1 5 performed by a computer and require no human intervention The WO...

...task slips, there are only two possible
states that can exist First, there are dependent **tasks scheduled** in
the same day Second, there are no dependent **tasks** in the same
day In case where there are dependent **task scheduled** in the same
day, an alarm is sent to the supervisor, who can immediately stop
dependent **tasks scheduled** for the same day The **task** is left in the
pending state The remaining optimization (beyond the current day) is
handied in the offline system 101...Figure 8, the
distributed offline system 102 re-plans all activities, taking into
account that **tasks**, which are **assigned** to the stability zone 66
should
not be modified
Offline Optimization
Internal orders 10 shown...

Claim

... according to claim 1

wherein the constraints comprise work force utilization, customer
priority, due date, **task** dependencies, and geographic worker
assignments and the **schedule** is created and optimized based on the
constraints

3 A work progress tracking system according...

...tasks

based on a templates representing products and services stored in a
database and the **tasks** are incorporated into the **schedule** with a
plurality of dependencies

4 A work progress tracking system according to claim 3...

...further comprises

a database containing templates that divide customer order
entries into one or more **tasks** and a plurality of **scheduling** rules
1 0 7 A work progress tracking system according to claim 6,
wherein the...

...further comprises

a database containing templates that divide customer order
entries into one or more **tasks** and a plurality of **scheduling** rules
9 A work progress tracking system according to claim 8,
wherein the offline distributed...products and services stored in a
database comprising a
plurality of tasks for every possible **work order** and a plurality of
dependencies indicating which tasks of the plurality of task must be
completed before other dependent **tasks** can start,
an online distributed system to receive and **schedule** a plurality
of customer order entries with constraints, wherein the constraints
comprise work force utilization...

...entries and automatically issue an alarm and find a

free time slot when available to **schedule** a **task** associated with a
customer order entry of the plurality of customer order entries when a
delta occurs between a planned and actual completion of the **task**,
and

an offline distributed system to optimize the **schedule** based on the scheduling rules, templates and dependencies stored in the database,
the online distributed...

13/3,K/20 (Item 20 from file: 349)

DIALOG(R)File 349:PCT FULLTEXT

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00577731 **Image available**

A METHOD AND SYSTEM FOR MANAGING MOBILE WORKERS

PROCEDE ET SYSTEME PERMETTANT DE GERER LES EMPLOYES MOBILES

Patent Applicant/Assignee:

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GAON Yair,

KATZ Rafi,

Inventor(s):

GAON Yair,

KATZ Rafi,

Patent and Priority Information (Country, Number, Date):

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GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA
MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA
UG US UZ VN YU ZA ZW GH GM KE LS MW SD SL SZ TZ UG ZW AM AZ BY KG KZ MD
RU TJ TM AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF
CG CI CM GA GN GW ML MR NE NS TD TG

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Main International Patent Class: **G06F-017/60**

Fulltext Availability:

Detailed Description

Detailed Description

... the schedule, and the voice instruction is sent with a map and with a text **work - order** , breaking down the entire new item in the **schedule** according to **task** , skills, tools, parts, identification and reference numbers, etc.

According to the present invention, the monitoring...

13/3,K/21 (Item 21 from file: 349)

DIALOG(R)File 349:PCT FULLTEXT

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00560557

METHOD FOR THROUGHPUT MEASUREMENT

METHODE DE MESURE DE PRODUCTION

Patent Applicant/Assignee:

LILLY SOFTWARE ASSOCIATES INC,

Inventor(s):

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LILLY Richard T,
MAGLIO Frank G,
LONGMIRE Mark A,
BARKER Bruce W,

Patent and Priority Information (Country, Number, Date):

Patent: WO 200023930 A1 20000427 (WO 0023930)
Application: WO 99US24514 19991020 (PCT/WO US9924514)
Priority Application: US 98105129 19981021

Designated States:

(Protection type is "patent" unless otherwise stated - for applications prior to 2004)

AU CA AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE

Publication Language: English

Fulltext Word Count: 8473

Main International Patent Class: G06F-017/60

Fulltext Availability:

Detailed Description

Detailed Description

... all of the ordered items. In another embodiment, the matching step includes matching the inventory **work order** with the customer order line item according to the sequence in which the inventory **work orders** are stored in the demand array and the sequence in which the inventory In general...

...contention severity of a resource. The method includes identifying a first start/date time to **assign** a **task** to a resource, determining whether the resource is already allocated at the first date/time...a resource description, a work order and operation identifier, an attempt number in which the **work order** was attempted to be **scheduled** at the resource, a **scheduling** direction, attempt **start** date, attempt end date, the **start** date of the listed operation, the end date of the listed operation, and the severity...a piece number for that part on the operation, the attempt number on which the **work order** was attempted to be **scheduled**, a **scheduling** direction, attempt **start** date, attempt end date, the **start** date of the listed operation, the end date of the listed operation, and the severity...

13/3,K/22 (Item 22 from file: 349)

DIALOG(R)File 349:PCT FULLTEXT

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00367145 **Image available**

**METHOD AND APPARATUS FOR A PROCESS AND PROJECT MANAGEMENT COMPUTER SYSTEM
PROCEDE ET APPAREIL POUR SYSTEME INFORMATIQUE DE GESTION DE PROCESSUS ET DE
PROJET**

Patent Applicant/Assignee:

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LEISTEN Udo,

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Patent and Priority Information (Country, Number, Date):

Patent: WO 9707472 A1 19970227

Application: WO 95EP3289 19950818 (PCT/WO EP9503289)
Priority Application: WO 95EP3289 19950818
Designated States:
(Protection type is "patent" unless otherwise stated - for applications
prior to 2004)
JP US AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE
Publication Language: English
Fulltext Word Count: 14364

Main International Patent Class: G06F-017/60
Fulltext Availability:
Detailed Description

Detailed Description

... their execution attributes will be
handed to the executing persons in the form of a **work
order** , for example in a printed form, The person
receiving a **work order** must return the information to the
system on the acceptance of the **work order** , as to
instruct the project **management** function about the **start**
of the execution of the **task** , and has to report back to
the system work progress and work termination, included
some...

13/5/1 (Item 1 from file: 2)

DIALOG(R) File 2:INSPEC

(c) 2005 Institution of Electrical Engineers. All rts. reserv.

6335989 INSPEC Abstract Number: C1999-10-1290F-035

Title: Task scheduling by guided simulated annealing

Author(s): Cheng, C.H.; Mak, W.T.; Rao Tummala, V.M.; Feiring, B.R.

Journal: Production Planning and Control vol.10, no.6 p.530-41

Publisher: Taylor & Francis,

Publication Date: Sept. 1999 Country of Publication: UK

CODEN: PPCOEM ISSN: 0953-7287

SICI: 0953-7287(199909)10:6L:530:TSGS;1-T

Material Identity Number: 0556-1999-006

Language: English Document Type: Journal Paper (JP)

Treatment: Theoretical (T)

Abstract: Presents an algorithm to **schedule tasks in work orders** for a manufacturing company in a job-shop environment. The algorithm is a modified form of simulated annealing, where each perturbation is guided by several factors, one of which is the cruciality of each day in the current solution state. This approach is found to be generally superior to the ordinary annealing algorithm. (8 Refs)

Subfile: C

Descriptors: production control; simulated annealing

Identifiers: **task scheduling**; guided simulated annealing; **work orders**; manufacturing company; job-shop environment

Class Codes: C1290F (Systems theory applications in industry); C1180 (Optimisation techniques)

Copyright 1999, IEE

13/5/2 (Item 2 from file: 2)

DIALOG(R) File 2:INSPEC

(c) 2005 Institution of Electrical Engineers. All rts. reserv.

03885889 INSPEC Abstract Number: C91037320

Title: The scheduler's knowledge of uncertainty: the missing link

Author(s): McKay, K.N.; Buzacott, J.A.; Safayeni, F.R.

Author Affiliation: Dept. of Manage. Scis., Waterloo Univ., Ont., Canada

Conference Title: Knowledge Based Production Management Systems. Proceedings of the IFIP WG 5.7 Working Conference p.171-89

Editor(s): Browne, J.

Publisher: North-Holland, Amsterdam, Netherlands

Publication Date: 1989 Country of Publication: Netherlands xi+339 pp.

ISBN: 0 444 87287 6

Conference Sponsor: IFIP

Conference Date: 23-25 Aug. 1988 Conference Location: Galway, Ireland

Language: English Document Type: Conference Paper (PA)

Treatment: Practical (P)

Abstract: The problem faced by real world **schedulers** is not the simple **task** of taking quantifiable numbers and allocating resources to **work orders**. The authors present a view of the real world of job shop scheduling and a preliminary model for an integrated scheduling system that satisfies the requirements. The human scheduler is considered to be the major component of the system and is integrated with a domain manager that maintains a knowledge base of measures, rules objectives, constraints and results of past scheduling activities. A schedule comparator uses the measures, degrees of relaxation, etc., in the knowledge base to define a scheduling problem suitable for mathematical analysis. The schedule comparator invokes a schedule generator until the schedule is 'good' enough. The human scheduler is tracked as the generated schedule is

modified. The expert system attempts to capture the reasons for the changes and thus enhance the rule base for measuring the quality of the schedule.

(19 Refs)

Subfile: C

Descriptors: knowledge based systems; resource allocation; scheduling

Identifiers: uncertainty; real world schedulers; real world; job shop scheduling; preliminary model; integrated scheduling system; human scheduler; domain manager; knowledge base; rules; constraints; past scheduling activities; schedule comparator; scheduling problem; mathematical analysis; schedule generator; expert system; rule base; quality

Class Codes: C7160 (Manufacturing and industry); C1290F (Industry); C6170 (Expert systems)

13/5/3 (Item 3 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2005 Institution of Electrical Engineers. All rts. reserv.

03487877 INSPEC Abstract Number: C89068664

Title: Effective preventive maintenance

Author(s): Huseman, J.M.

Author Affiliation: Goodyear, Lincoln, NE, USA

Journal: Electrical Construction and Maintenance vol.88, no.2 p. 79-82

Publication Date: Feb. 1989 Country of Publication: USA

CODEN: ECOMAU ISSN: 0013-4260

Language: English Document Type: Journal Paper (JP)

Treatment: Practical (P)

Abstract: Dorsey Laboratories, a division of Sandoz Pharmaceuticals, is using a new computerised preventive maintenance system. The author looks at the selection, usage and benefits of the system which coordinates **work orders**, **task** descriptions, parts inventory and time **management** to increase efficiency and reduce costs. (0 Refs)

Subfile: C

Descriptors: chemical industry; maintenance engineering; medical administrative data processing; stock control data processing

Identifiers: Dorsey Laboratories; costs reduction; Sandoz Pharmaceuticals; computerised preventive maintenance system; **work orders**; task descriptions; parts inventory; time management; efficiency

Class Codes: C7140 (Medical administration)

13/5/4 (Item 4 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2005 Institution of Electrical Engineers. All rts. reserv.

03471941 INSPEC Abstract Number: C89063086

Title: Technological advances in railroads' work order reporting systems

Author(s): Ben-Yaacov, G.; Ruegg, G.A.

Author Affiliation: Autom. Monitoring & Control Int. Inc., Omaha, NE, USA

Conference Title: 39th IEEE Vehicular Technology Conference (IEEE Cat. No.89CH2739-1) p.682-8 vol.2

Publisher: IEEE, New York, NY, USA

Publication Date: 1989 Country of Publication: USA 2 vol. 901 pp.

U.S. Copyright Clearance Center Code: CH2379-1/89/0000-0682\$01.00

Conference Sponsor: IEEE

Conference Date: 1-3 May 1989 Conference Location: San Francisco, CA, USA

Language: English Document Type: Conference Paper (PA)

Treatment: Practical (P)

Abstract: **Work - order** reporting systems enable crewmen to report completed work directly from the locomotives. This is accomplished by placing mobile data terminals onboard the locomotives. The terminals then communicate the completed work information to the railroad's host computer system over a data radio network. This approach avoids after-the-fact clerical input. Railroads can therefore reduce the clerical staff currently **assigned** to perform manual data-entry **tasks**. A reduction in car-hire costs and improved customer services are additional benefits resulting from the use of **work - order** reporting systems. (3 Refs)

Subfile: C

Descriptors: data communication systems; distributive data processing; mobile radio systems; railways

Identifiers: railroads; **work order** reporting systems; locomotives; mobile data terminals; host computer system; data radio network

Class Codes: C7180 (Retailing and distribution)

13/5/5 (Item 5 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2005 Institution of Electrical Engineers. All rts. reserv..

03182664 INSPEC Abstract Number: C88047047

Title: **MRP II-the competitive edge**

Author(s): Lim Khee Leng

Journal: IES Journal vol.27, no.3 p.58-63

Publication Date: Sept. 1987 Country of Publication: Singapore

CODEN: IEJOD4 ISSN: 0377-7464

Language: English Document Type: Journal Paper (JP)

Treatment: Practical (P)

Abstract: Manufacturing resource planning (MRP II) is a system for managing all the resources in a manufacturing company. The complex scheduling and tracking requirements of the total manufacturing process are reduced to a **managerial task** with the aid of computers, using MRP II logic. MRP II provides a material replenishment plan by suggesting delivery dates quantities and **work orders** such that there is just sufficient material available just-in-time for subsequent operations to proceed. MRP II provides a powerful capability for production review, as frequently and in as much detail as possible. The detailed schedules from MRP II ensure that all departments can now work with the same set of schedules and priorities. Sales delivery promises are confirmed, intended due dates can be seen in the context of their impact on manufacturing. Purchased deliveries can be reviewed. With MRP II, everyone has an orchestrated plan and a valid schedule to work on. (0 Refs)

Subfile: C

Descriptors: manufacturing data processing

Identifiers: purchasing; sales; MRP II; resource planning; scheduling; manufacturing process; delivery dates

Class Codes: C7160 (Manufacturing and industry)

13/5/6 (Item 1 from file: 35)

DIALOG(R)File 35:Dissertation Abs Online

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01124295 ORDER NO: AAD90-27749

ENGINEERING DATABASE AND APPLICATION DEVELOPMENT FOR TELEPHONE OUTSIDE PLANT NETWORKS (DATABASE DESIGN)

Author: DANIELSON, SCOTT GEORGE

Degree: PH.D.

Year: 1990
Corporate Source/Institution: NORTH DAKOTA STATE UNIVERSITY (0157)
Chair: GREGORY R. GESSEL
Source: VOLUME 51/05-B OF DISSERTATION ABSTRACTS INTERNATIONAL.
PAGE 2594. 236 PAGES
Descriptors: ENGINEERING, SANITARY AND MUNICIPAL; ENGINEERING, GENERAL;
COMPUTER SCIENCE
Descriptor Codes: 0554; 0537; 0984

An investigation into the feasibility of creating an engineering database to model the telephone outside plant network was conducted. The investigation was based on research combining an understanding of the physical telephone outside plant network structure and semantic and relational database design theory. First, a semantic data model for telephone outside plant was developed via the entity-relationship approach. This logical representation of the network was used to generate an abstract relational data structure that was then normalized to third normal form where possible. The result, a detailed semantic and relational database structure for the entire telephone outside plant network, was the primary contribution of the dissertation. This data structure supports the mechanics of tracing telephone circuits (pair counts) and accommodates information concerning engineering **work orders** and planning activities.

Tracing an individual telephone circuit through the telephone cable network is the basis of many tasks performed by telephone engineers. Providing this capability required discovery of new analysis techniques which are based upon the database structure and data query language.

The secondary objective of the dissertation was to design and develop engineering application software based on this relational database structure. This application software design was implemented using Ingres for PCs (Ingres Corporation, Alameda, CA) relational database **management**

software. A specific engineering **task**, the telephone cable make-up, was used to successfully validate the database structure and application software. Additional FORTRAN programs were written, in support of the database application, to perform parts of the cable make-up analysis.

A simple communication link between a remote computer-aided drafting and design (CADD) package and the PC-based database manager was established. A methodology for linking the database application to CADD-based telephone plant maps was demonstrated.

13/5/7 (Item 1 from file: 256)
DIALOG(R)File 256:TecInfoSource
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00143526 DOCUMENT TYPE: Review

PRODUCT NAMES: OpenMFG (141577); WiseXE (141585)

TITLE: From Shop Floor to Your Door: Small manufacturers buy low-end...

AUTHOR: Ewalt, David M

SOURCE: Information Week, v916 p45(1) Nov 25, 2002

ISSN: 8750-6874

HOME PAGE: <http://www.informationweek.com>

RECORD TYPE: Review

REVIEW TYPE: Product Analysis

GRADE: Product Analysis, No Rating

Many smaller manufacturers have not yet invested in enterprise resource planning (ERP) systems, and those that have may not be getting full value

out of them. A manufacturer of dental supplies turned to an ERP suite from OpenMFG designed to meet the needs of small manufacturers. Before OpenMFG, their scheduling, planning, and **work orders** were overwhelming, but the ERP system simplified their processes. **Scheduling tasks** that used to take a whole day to set up can now be done in 30 minutes. There is a major unmet need at the low end of this market, and OpenMFG was created to fill this need. Other vendors are also targeting this niche with ERP offerings. Fullscope, a collaboration software vendor, recently launched WiseXE, a suite designed to let manufacturers get more out of their existing ERP systems. WiseXE is a modular offering that pulls data from ERP systems, and drives that information to users in the front office. For example, the WiseView module lets customer service reps see customer information from back end systems.

COMPANY NAME: OpenMFG LLC (734438); Fullscope Inc (734446)
DESCRIPTORS: Enterprise Resource Planning; Manufacturing; Production
Control; Small Business; Software Marketing
REVISION DATE: 20030530

13/5/8 (Item 2 from file: 256)
DIALOG(R) File 256:TecInfoSource
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00141668 DOCUMENT TYPE: Review

PRODUCT NAMES: Windchill ProjectLink (036226); Metaphase (779652)

TITLE: A Faster Ride to Market
AUTHOR: Raskin, Andrew
SOURCE: Business 2.0, v3 n10 p49(4) Oct 2002
ISSN: 1080-2681
HOMEPAGE: <http://www.business2.com>

RECORD TYPE: Review
REVIEW TYPE: Product Analysis
GRADE: Product Analysis, No Rating

PTC Windchill ProjectLink and EDS's Metaphase are highlighted in this discussion of the advantages of powerful product lifecycle management (PLM) applications that speed design and engineering changes. For instance, with PTC Windchill ProjectLink, Cannondale allows executives to request and approve a design change. The system then alerts all parties to the change. Engineers work on prototypes, and departments responsible for manufacturing receive their orders. The result is a shorter time to market for the new, lighter ATVs. Windchill performs as a project **manager** who can oversee all **tasks** and operations concurrently, and allows Cannondale's staff to access move requests for design changes, product specifications, and **work orders**. Windchill ProjectLink, says a spokesperson for Cannondale, keeps 2003 models on an accelerated schedule while maintaining sanity throughout the production line. Cannondale probably spends 40 percent less time on communication, and errors are all but eliminated. Too often, says an analyst, production is managed solely with Microsoft Word templates, Excel spreadsheets, and some image files, when such products as Windchill ProjectLink and Metaphase (which puts engineering drawings, part simulations, and manufacturing guidelines online) could shorten time to market.

COMPANY NAME: Parametric Technology Corp (PTC) (434591); EDS PLM
Solutions (552488)

SPECIAL FEATURE: Charts Tables Graphs
DESCRIPTORS: CAD CAM; CAE; Engineering Documentation; Groupware; Product
Lifecycle Management
REVISION DATE: 20040130

13/5/9 (Item 3 from file: 256)
DIALOG(R) File 256:TecInfoSource
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00113766 DOCUMENT TYPE: Review

PRODUCT NAMES: Prism Executive Suite (733326)

TITLE: Prism Executive Suite
AUTHOR: Carnell, Michael
SOURCE: Intelligent Enterprise, v2 n2 p60(1) Jan 26, 1999
ISSN: 1524-3621
HOMEPAGE: <http://www.intelligententerprise.com>

RECORD TYPE: Review
REVIEW TYPE: Product Analysis
GRADE: Product Analysis, No Rating

Prism Solutions' Prism Executive Suite now from Ardent Software includes the Warehouse Executive, the Warehouse Directory, and the Quality Manager. The software helps companies merge various data types from disparate systems, and ensures data integrity. Warehouse Executive includes a group of components for data acquisition, translation, and automation. Warehouse Directory stores database metadata and the technical, business, operational, and quality definitions that direct system use and development. Quality Manager makes sure that decisions are based on correct information. UGI Utilities, a natural gas and electric utility, chose Prism Executive Suite to leverage its investment in a DB2 data warehouse. UGI's application, which was a basic warehouse for **work - order** management, now includes finance and human resources, and will in the future include customer information. In another project, Prism Executive Suite was deployed to speed a development cycle by automating many data acquisition, transformation, and maintenance tasks. Information was integrated from different systems, and had to be displayed in a geographical information system (GIS) format. Implementors say that Prism's automation and quality assurance are key to keeping project **tasks manageable**. Prism was recently acquired by Ardent Software, a developer of tools for relational database management, data warehouse development, and object data management.

COMPANY NAME: IBM Corp (351245)
SPECIAL FEATURE: Graphs Charts
DESCRIPTORS: Data Warehouses; Decision Support Systems; Information
Retrieval; Integration Software; Quality Assurance
REVISION DATE: 20040130